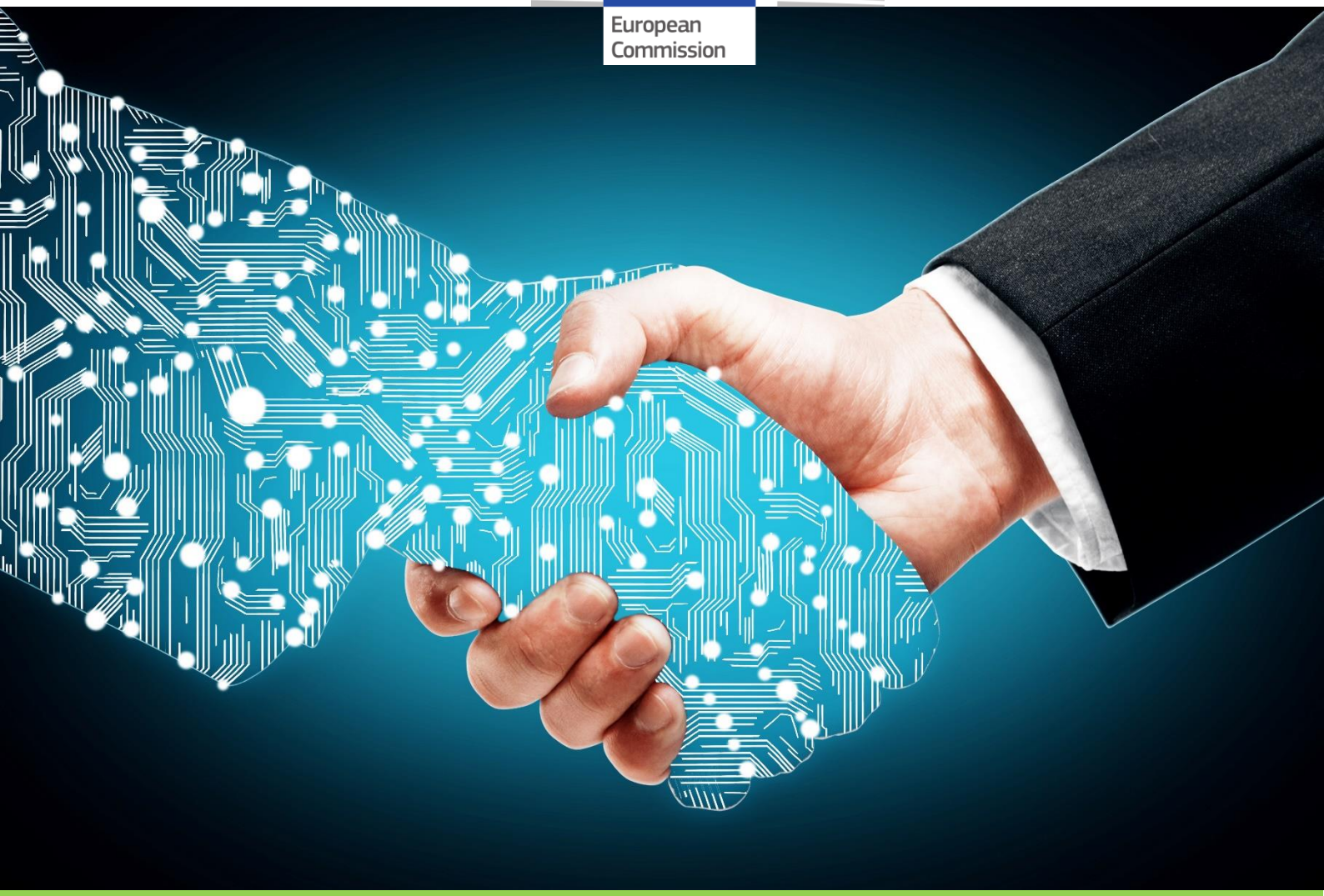

The role of eGovernment and Interoperability in the European Semester process

Study on the main actions, plans and funding priorities of Member States

DIGIT

Directorate-General for Informatics

ISA² Programme

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EUROPEAN COMMISSION

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Luxembourg: Publications Office of the European Union, 2018

Print	ISBN: 978-92-79-77069-2	DOI: 10.2799/90868	NO-06-17-461-EN-C
PDF	ISBN: 978-92-79-77068-5	DOI: 10.2799/04018	NO-06-17-461-EN-N

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DOCUMENT METADATA

Property	*European Commission*
Release date:	*1 June 2018*
Status:	*Accepted*
Authors:	*Giorgio Cacciaguerra Ranghieri, Vivien Devenyi, Stefan Georgiev, Barbora Kudzmanaite, Michael Scanlon, Sara Talpo, Alessandro Zamboni*
Keywords (to increase the SEO presence)	*European Semester, eGovernment, Interoperability, ESIF, Thematic Objective 2, Thematic Objective 11, eServices, Public Administration, digitisation, modernisation.*

This publication has been drafted under the 2016.21 action, which is supported by the ISA² Programme. ISA² is a EUR 131 million programme of the European Commission, supporting the modernisation of public administrations in Europe through the development of interoperability solutions. More than 20 solutions are already available, with more to come soon. All solutions are open source and available free of charge to any interested public administration in Europe.

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Introduction

The European Commission has set up a yearly cycle of economic policy coordination called the European Semester[1]. At the end of every European Semester, the European Commission issues Country Specific Recommendations[2] (CSRs) that summarise the actions needed to achieve growth and promote sustainable job-creating policies in each Member State.

In May 2017, the European Commission published the CSRs for 27 Member States. These recommendations reflect the European Commission's Economic and Social Agenda focusing on three mutually reinforcing pillars: boosting investment, implementing structural reforms and pursuing fiscal responsibility.

Following a mandate from the European Commission Directorate-General for Informatics (DG DIGIT), Wavestone was requested to examine the manner in which European Semester Processes addresses the topics of interoperability and eGovernment through an in-depth content analysis of the European Semester documents.

The European Semester is a yearly cycle of economic policy coordination, where the European Commission (EC) first publishes the Annual Growth Survey (AGS), setting out the next Period's European development goals. The EC subsequently undertakes to compile Member States' country reports and proceeds with detailed monitoring of Member States' budgetary plans, macroeconomic and structural reforms elaborated in their National Reform Programmes (NRPs). The process is complete with the issue of new CSR for the next period, which are agreed with Member States.

Within this study, the European Semester documents referred to are the 2017 Country Specific Recommendations (CSRs), the 2017 National Reform Programmes (NRPs), as well as the Operational Programmes (OPs) 2014 – 2020 financed by the European Structural and Investment Funds 2014-2020.

The study will cover all 28 EU Member States: **Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden,** and the **United Kingdom.**

Building on the results of the content analysis, the study will identify existing actions from the Interoperability Solutions for European Public Administrations (ISA[2]) programme and propose new actions that can foster the modernisation of public administrations and improve institutional capacity.

The report comprises the following main sections:

- **Section 1 Context and Background**: setting the political and economic context of the study.
- **Section 2 Methodology**: describing the methodology used to conduct the study.

[1] European Semester Description, available at: http://ec.europa.eu/europe2020/making-it-happen/index_en.htm.
[2] Country Specific Recommendations within European semester, available at: https://ec.europa.eu/info/strategy/european-semester/european-semester-timeline/eu-country-specific-recommendations_en.

- **Section 3 Key Findings**: providing a detailed description of the key findings of the study.
- **Section 4 Measures and priorities:** providing the taxonomy analysis of the main findings of the study.
- **Section 5 Conclusions and Recommendations**: providing the main insights of the study.

1. Context and Background

Increasing transparency, efficiency, and accountability in public administrations is crucial for the future prosperity of Europe. Member States must ensure an improved administrative capacity and a focus on the increased use of digital tools, in order to achieve their development goals and fulfil Europe's digital potential.

The European Commission's priorities in relation to eGovernment and interoperability are outlined in the Digital Single Market (DSM) Strategy[3]. Pillar three of the DSM focuses on reaping the benefits offered by digitisation for society and the economy.

The launch of the eGovernment Action Plan for the period 2016-2020[4] aims to foster the development of eGovernment. The initiative aims to encourage the modernisation of public administration, which will be funded through existing programmes, such as the Connecting Europe Facility (CEF)[5] and the ISA[2] programme[6].

- **CEF Telecom:** dedicating approximately EUR 1 billion to enhancing Digital Service Infrastructures (DSIs) and Broadband networks, it aims to improve the competitiveness of the European economy and promote the access to and interoperability of national networks, while developing the DSM. CEF offers funding opportunities through calls for tenders or calls for proposals. CEF supports basic digital services, known as building blocks (eIdentification; eSignature; eInvoicing) and more complex services are accessible (open data, cybersecurity, eHealth).
- **ISA² programme:** the ISA² programme supports the development of digital solutions enabling public administrations, businesses and citizens in Europe to benefit from interoperable public services. The ISA² programme runs from January 2016 to December 2020. ISA² puts in place the necessary instruments to boost interoperability at EU and national levels, such as EIF (European Interoperability Framework), EIS (revised European Interoperability Strategy), EIRA (European Interoperability Reference Architecture) and EIC (European Interoperability Cartography).

The study's main goal is to find tangible links between the ISA[2] programme's priorities and actions and the European Semester process in the 28 studied countries.

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[3] Communication from The Commission to The European Parliament, The Council, The European Economic and Social Committee and The Committee Of The Regions, A Digital Single Market Strategy for Europe, COM(2015) 192 final, Brussels, 6 May 2015.
[4] Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions: EU eGovernment Action Plan 2016-2020 Accelerating the digital transformation of government (COM(2016) 179 final).
[5] Regulation (EU) No 1316/2013 of the European Parliament and of the Council of 11 December 2013 establishing the Connecting Europe Facility, amending Regulation (EU) No 913/2010 and repealing Regulations (EC) No 680/2007 and (EC) No 67/2010.
[6] Decision (EU) 2015/2240 of the European Parliament and of the Council of 25 November 2015 establishing a programme on interoperability solutions and common frameworks for European public administrations, businesses and citizens (ISA2 programme) as a means for modernising the public sector.

Under the framework of the Europe 2020 strategy[7], all Member States are subject to the new system of economic monitoring and governance known as the European Semester[8] discussed in the introduction section. Each Semester, the European Commission and Council carry out a performance review of economic indicators as well as budgetary programmes for Member States, which includes the detailed monitoring of Member States' budgetary plans, macroeconomic and structural reforms. To this end, each government presents its annual NRP by outlining the country's policies and measures to sustain growth and jobs, in order to achieve its growth targets but also the Europe 2020 targets.

The European Commission issues the CSRs to each Member State after receiving and reviewing its NRP. Now, in addition to the NRP, the CSRs are based on other things. They are partly based on other detailed analyses of each country's situation, i.e. Commission's Country Reports, as well as on the Stability and Convergence Programmes presented by Member States. The CSRs summarise the progress made by Member States over the last year, and recommends structural reforms that each Member State should carry out over the next 12-18 months.

A more detailed description of the European Semester process is offered in Box 1.

[7] Communication from the Commission on Europe 2020, A strategy for smart, sustainable and inclusive growth, COM(2010) 2020 final, Brussels, 3.3.2010.
[8] European Semester Timeline, available at: https://ec.europa.eu/info/strategy/european-semester/european-semester-timeline_en

Box 1 Description of the European Semester

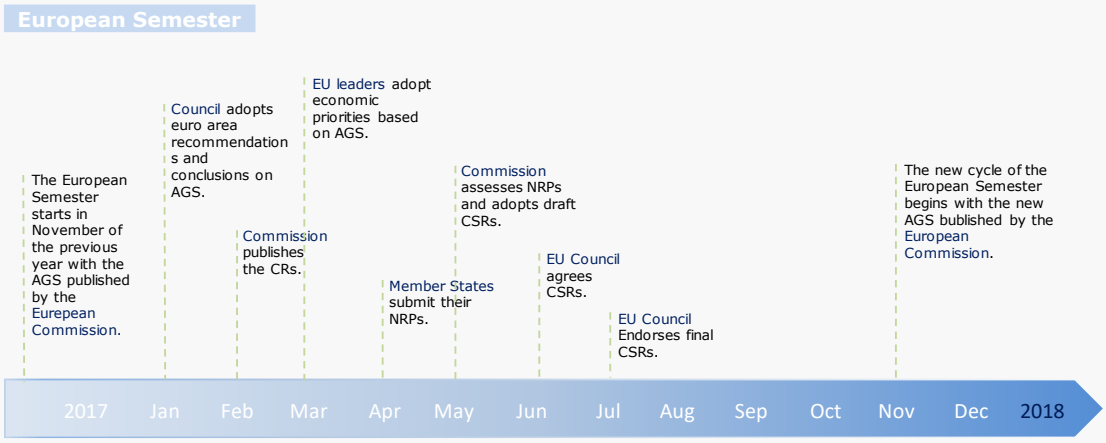
The European Semester is the EU's cycle of economic and fiscal policy coordination[9]. The Semester starts in November with the publication of the Annual Growth Survey (AGS)[10], where the European Commission sets out the key economic policy priorities for the year to come. The AGS includes both a review of progress achieved and an observation of the economy: Member States' growth, competitiveness, unemployment and structural reforms. The 2017 AGS focuses on jobs, growth and investment and is based on 3 main pillars:

Pillar I: A boost to investment;

Pillar II: A renewed commitment to structural reforms; and

Pillar III: A pursuit of fiscal responsibility.

The figure below presents the main process of and the key documents of the European Semester[11], published since 2014[12] (i.e. AGS, NRP, CSR), with key milestones. The Operational Programmes (not in the timeline) have been adopted by the Member States in 2014 and contain detailed projects until 2020.



Notes:

AGS – Annual Growth Survey;

CR – Country Report;

CSR – Country-Specific Recommendation;

NRP – National Reform Programme.

This study will deal with those aspects of the European Semester most directly relevant to the monitoring of eGovernment and interoperability developments.

To sustain the implementation of Member States' NRP, and thus fulfil the European Semester process, specific OPs are signed by Member States to receive funding for investment initiatives. Funding is allocated to OPs within the framework of European Structural and Investment Funds (ESIF), which support 11 investment priorities, also known as thematic objectives (TO).

Two TOs in particular relate to the eGovernment and interoperability aspects: **TO2 – 'Enhancing access to, and use of and quality of ICT'**[13] and **TO11 – 'Enhancing institutional capacity of public authorities, stakeholders and efficient public administration'**[14]. For this study, an in-depth content

[9] http://www.consilium.europa.eu/en/policies/european-semester/

[10] http://ec.europa.eu/europe2020/documents/related-document-type/index_en.htm

[11] Making it happen: The European Semester. Available at: http://ec.europa.eu/europe2020/making-it-happen/index_en.htm

[12] The figure represents the documents in a chronological order for year 2014, i.e. the first year of the European Semester, however the structure is recurrent every year.

[13] Huckfield, Future of EU funds – Thematic Objectives: Thematic Objectives for EU Funds 2014 – 2020), 05. November 2012.

[14] As stipulated in Article 9 on page 35 of the Common Strategic Framework, each of the five ESI Funds (ERDF, ESF, CF, EAFRD and EMFF) supports different thematic objectives in accordance to its mission, in order to contribute to the Union strategy for smart sustainable and inclusive growth

analysis of the European Semester documents will be conducted mainly through the prism of these ESIF TOs. In addition to the European Regional Development Fund, the European Social Fund provides funding and specifically targets development linked to TO2 and TO11.

The study will look specifically at aspects within TO2 regarding the strengthening of ICT applications for eGovernment, eHealth and eJustice, which are key to the modernisation of public administrations, the administrative capacity building and are directly linked to the ISA[2] programme actions.

With regard to TO11, the study refers to administrative capacity building through the use and application of ICT tools by public administrations. The European Commission's guidance document on Public Administration Capacity for the 2014-2020 period[15] identifies two investment priorities under TO 11, which are taken into account by the study:

- Investment in institutional capacity and in the efficiency of public administrations at the national, regional and local levels, with a view to reform regulation and governance (article three (d) (i) ESF Regulation).
- Capacity building for all stakeholders delivering education, lifelong learning, training, employment and social policies, including sectorial and territorial pacts for reform at the national, regional and local levels (article 3(d) (ii) ESF Regulation).

Box 2 provides additional details about administrative capacity building and its link with the modernisation of public administrations.

[15] DG REGIO, Draft thematic guidance fiche for desk officers: Institutional Capacity Building (Thematic Objective 11), Version 2, DG REGIO: Brussels, 22.01.2014.

Box 2 Administrative Capacity Building

The modernisation of public administration is directly connected with the Administrative Capacity Building (ACB). Moreover, ACB is linked to the common indicators set in the European Commission Programming Period 2014 – 2020, which were used to monitor and evaluate the European Cohesion Policy and, more precisely, the ESIF TO11.

There is a diverse field of classifications of ACB activities. For example, the Organisation for Economic Co-operation and Development (OECD) defines institutional capacity as the '*sum of organisational, structural and technical systems, as well as individual competencies that create and implement policies in response to the needs of the public*'[16]. For the World Bank, ACB encompasses three main activities: skills upgrading, procedural improvements and organisational strengthening.

Combining all of the above, ACB can be considered as the investment in the ability of public authorities to perform their functions in a way that leads to more efficient and effective operations of the public administrations. In broad terms, ACB can be enhanced through the improvement of working methods, procedures, tools and (IT) systems, together with better overall coordination and planning.

Strengthening public administrations has become an integral part of the EU's enlargement process in terms of the integration of the *acquis communautaire* by accession countries[17]. However, even after their accession to the EU, newer Member States continue to receive funding to support the strengthening of their administrative capacities. For example, the European Social Fund (ESF) allocates resources for ACB in Member States and evaluates their development in terms of organisational change, monitoring and evaluation techniques, together with the continuity and stability of reforms**.**

[16] ec.europa.eu/social/BlobServlet?docId=14144&langId=en
[17] https://ec.europa.eu/neighbourhood-enlargement/policy/conditions-membership/chapters-of-the-acquis_en

2. Methodology

The main purpose of this study is to identify the role of eGovernment and interoperability in the modernisation of public administration within the framework of the 2017 European Semester process. It aims also to identify potential actions and new activities within the scope of the recently adopted ISA[2] programme[18].

This chapter provides the overall methodological approach applied in the study's development around a series of research questions guiding the in-depth content analysis for the European Semester documents 2017[19]. The methodology can be divided into three phases: Study Initiation (phase 1), In-Depth Content Analysis (phase 2) and results' interpretation (phase 3).

Phase 1 – Study Initiation

The initiation phase includes the definition of the scope of the study. Following initial exploratory meetings, the European Commission mandated a series of research questions to be addressed in a study on the Modernisation of Public Administration in the EU. This study will address the following research questions (RQ):

- **RQ 1** – How do the Country Specific Recommendations, National Reform Programmes and Operational Programmes tackle Information Communication Technology (ICT) for the modernisation of public administration?
- **RQ 2** – Based on the various Country Specific Recommendations, National Reform Programmes and Operational Programmes analysed, are there any common elements?
- **RQ 3** – Based on the various Country Specific Recommendations, National Reform Programmes and Operational Programmes analysed, what are the main challenges still facing EU countries in terms of the modernisation of public administration?

Phase 2 – In depth content analysis

In the second phase, the study aims to provide a concise analysis of the current eGovernment state of play in which the recommendations and priorities are set in order to investigate possible correlations between the state of eGovernment development in Member States and the amount or recommendations or mentions that they receive on the subject in the 2017 European Semester documents. The information for this task is taken from the DSM scorecard, which uses Digital Economy and Society Index (DESI) data[20]. More specifically, DESI dimension of 'Digital Public Services' will be

[18] ISA[2] Programme, available at: http://ec.europa.eu/isa/isa2/index_en.htm
[19] We refer to 'European Semester documents 2016 as Country Specific Recommendations and National Reform Programmes issued in 2016 and Operational Programmes for the period 2014-2020.
[20] https://ec.europa.eu/digital-single-market/en/desi

presented for each country[21]. Furthermore, the eGovernment[22] and NIFO[23] factsheets available on the European Commission collaborative platform Joinup[24] are used to provide an assessment of the most recent eGovernment and interoperability developments in the countries analysed in this study.

The main purpose of the second phase, however, is to assess how the 2017 European Semester documents and individual country OPs for 2014-2020 address the topic of eGovernment and interoperability and the links to TO2 and TO11. This will be achieved through a qualitative in-depth content analysis of the European Semester documents. In a first step, the study identifies the different reforms and categorises them according to different thematic areas linked to TO2 and TO11. Table 1 illustrates which keywords are linked to the various themes and their respective TO. Some themes, such as public procurement, might be linked to both TO2 and TO11, however, for the purposes of this study, public procurement in the scope of B2G has been clustered in TO2. Furthermore, the justice system is defined not as a sector or public service in the Thematic Objective guide[25], but as 'one of the three institutional pillars of a modern state', it can, thus, also be linked to TO2 or TO11 depending on the context and whether it delivers a service to citizens and businesses. Consequently, the study classifies initiatives linked to enhancing the efficiency and capacity of the judiciary under TO11, whilst initiatives that enhance judicial services, such as making court proceedings more accessible to citizens, are classified under TO2.

Table 1 Thematic breakdown of priorities and key terms addressed in NRP, CSR and OP

TO	Priorities	Key terms
TO2	Developing enabling technologies for better ICT usage and access	eID, eAuthentification, eDelivery of Documents, eInvoicing, eProcurement, digital infrastructure support, Open Data.
	Strengthening of ICT applications in different sectors	eGovernment, eLearning, eHealth, eCulture, eTourism, Intelligent transport, cyber-security, smart grid and buildings, eTax, digitisation, electronisation.
	Enhancing accessibility, use and quality of ICT by citizens	Digital literacy, eLearning, eInclusion, eSkills and entrepreneurial skills.
	eBusiness	Smart use of ICT, SME competitiveness enhancement, digital value chains.
	Improving connectivity to ICT services	High-speed networks, mobile, cloud services, big data.
TO11	Enhancing capacity of public authorities and stakeholders delivering education, lifelong learning, training and employment	Capacity building, training, skills improvement, transparency, accountability.
	Increasing efficiency of public administration and public services	Improving cost-effectiveness, registry system, information system, enhancing business models and procedures, efficiency and capacity building of institutions, reduction of administrative burden.
	Ensuring better public service delivery	IT systems, IT tools, one-stop shops, eServices, Government Portal, Single Point of Contact, better knowledge management, ICT inventory.

[21] Refer to footnote 20.
[22] https://ec.europa.eu/digital-single-market/en/news/egovernment-factsheets-2017
[23] https://joinup.ec.europa.eu/community/nifo/og_page/nifo-factsheets
[24] https://joinup.ec.europa.eu/
[25] Thematic Objectives, available at: http://ec.europa.eu/regional_policy/en/policy/what/glossary/t/thematic-objectives

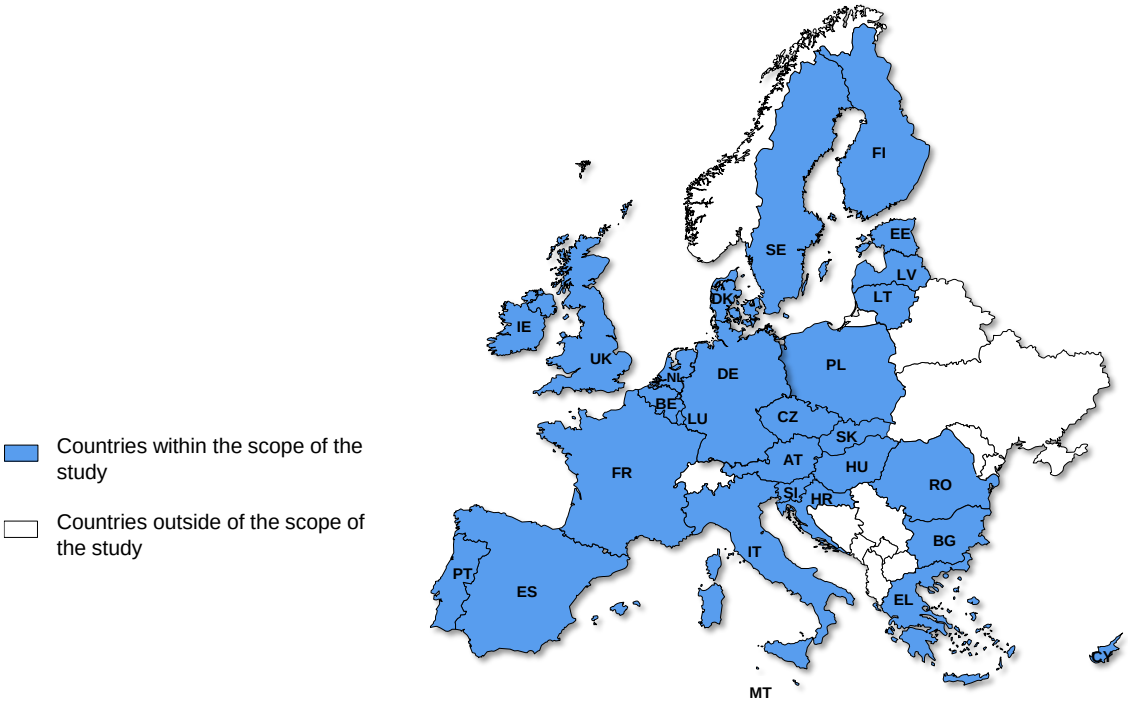
Phase 3 – Result interpretation

After the content analysis, the study proceeds to assess how and to what extent the European Semester documents and OPs address the topic of information technology for the modernisation of public administration in response to RQ 1. Additionally, following the content analysis, the study will proceed to identify commonalities between the country documents and understand what challenges Member States continue to face when using ICT for public administration modernisation (RQ 2 and RQ3). Building upon the results of the in-depth content analysis, conclusions and recommendations for the Commission will be provided.

3. Key Findings

This section presents the key findings of the in-depth content analysis of the 2017 CSRs and NRPs, as well as the 2014 - 2020 OP for the 28 countries under the scope of this study, as shown in Figure 1 below.

Figure 1 Member States within the scope of the study



The key findings section summarises recommendations, actions, and priorities at national level, extracted from the analysed documents. The main objective of this study is to identify whether a relationship exists between country priorities and existing ISA^2 actions.

Overall, the results of this analysis will ensure an improved promotion of the existing ISA^2 actions, as well as the identification of areas not currently covered by ISA^2 that can bring an added value to the modernisation of public administration and administrative capacity building in the EU.

The country analysis for each of the 28 countries consists of the following five sections:

1. Summary of macro-economic information contained in the country's **2017 CSRs**.
2. **Country eGovernment and interoperability Outlook:** analysing data for the country from the **eGovernment factsheets, NIFO factsheets** and **DESI**.
3. **Country Specific Recommendations (CSRs):** an analysis of the **TO2** and **TO11 recommendations** contained in the country's **2017 CSR**.
4. **National Reform Programmes (NRPs):** an analysis of the **TO2** and **TO11** related activities contained in the country's **NRP**.
5. **Operational Programmes (OPs):** an analysis of the funding priorities linked to **TO2** and **TO11** contained in the country's **OP**.

3.1 Austria

3.1.1 *Socio-economic Outlook*

Economic Outlook

The most recent AGS did not identify Austria as a country in need of an in-depth review, which is a testament to its strong public finances. The macro-economic environment appears stable; Austria has a forecasted GDP growth rate of 1.7% in both 2017 and 2018. In its 2017 Stability Programme, the Austrian government expects that the headline deficit will shrink from 1.0% of GDP in 2017 to reach 0.3% of GDP in 2021. According to the programme, the general government debt-to-GDP ratio is expected to decline from 84.6% in 2016 to 71.0% in 2021[26].

Social Spending

The pension system, however, poses a risk to fiscal sustainability in the medium to long term, due to a rapidly ageing population. Austria's public expenditure on pensions remains high compared to the rest of the EU and is expected to increase by 0.5% of GDP by 2060, compared to an EU average of 0.2%. The effective retirement age, at 60 years and 3 months, remains low, and is one of the main drivers of higher expenditure. Linking the statutory retirement age to changes in life expectancy would help to ensure pension sustainability.

Healthcare

As regards healthcare, expenditure is expected to rise significantly in the medium and long term from already high levels, namely by 1.3% of GDP by 2060 compared to the EU average of 0.9%. The main driver of the high healthcare spending is the reliance on a large hospital sector, while outpatient care is underutilised. The proportion of hospital expenditure in overall healthcare costs is one of the highest in the EU. Furthermore, Austria's hospital sector makes insufficient use of effective public procurement such as EU-wide tendering (0.23% of GDP compared to 0.62% EU average), procurement aggregation and non-price award criteria.

Fiscal Framework

The fiscal framework in Austria remains complex in terms of competencies and still suffers from misalignments between the revenue-raising powers and spending responsibilities of local and federal state governments. The overall tax wedge, although reducing from 49.5% to 46.7%, remains relatively high compared to the EU average of 40.6%, and is due to gradually increase as an effect of yearly fiscal drag. Non-income taxes, such as property taxes, are underutilised, mainly because the tax base is outdated. Non-income taxes are currently very low in Austria, amounting to 0.2% of GDP compared to the EU average of 1.6% of GDP in 2014.

Economic and Administrative Barriers

High regulatory barriers remain in the business services sector and regulated professions. The level of restrictions is higher than the EU average. In particular, for architects and engineers. In addition, for these professions, the business churn rate is significantly lower than the EU average, which seems to indicate relatively low dynamism and competition in professional services in Austria. These barriers include shareholding and company form restrictions for architects, engineers and patent attorneys, as well as multidisciplinary restrictions for architects and engineers. The reduction of such barriers could generate more intensive competition, resulting in consumer benefits.

[26] Recommendation for a Council Recommendation on the 2017 National Reform Programme of Austria and delivering a Council opinion on the 2017 Stability Programme of Austria, COM(2017) 519 final. Brussels, 22.5.2017.

3.1.2 *Country eGovernment and Interoperability Outlook*

Austria ranks fifth among EU countries in the 'Provision of Digital Public Services', which is similar to its rank in the previous DESI report[27]. Nevertheless, its overall performance increased from 0.68 to 0.73. 'eGovernment Users' is the sub-dimension in which Austria is currently underperforming against its average score.

The following are some of the eGovernment and interoperability highlights that have occurred in Austria since 2016:

- **December 2016:** in accordance with the positive trend regarding the activation of Mobile Phone Signatures, the introduction of the mobile eID solution (*Handy-Signatur*), demonstrates the growing acceptance of the Austrian citizen card within the Digital Roadmap[28] (www.digitalroadmap.gv.at).
- **July 2016:** accompanying the eIDAS Regulation, the new Signature and Trust Service Act (SVG), as well as an amendment to the E-Government Act (E-GovG), the government also launched the funding programme AT:net for the promotion of digital innovation in the following sectors: eGovernment, eHealth, eLearning, Support of SME. On 5 July, the Austrian government adopted the national Open Innovation Strategy[29].
- **June 2016:** the Federal Ministry of the Interior implemented a new eGovernment service to citizens who want to deregister their residence electronically by using the mobile phone signature[30].
- **February 2016:** the Federal Government presented a draft for the 'Digital Roadmap Austria', an initiative coordinated by the State Secretaries of the Federal Chancellery and the Federal Ministry of Science, Research and Economy. The Digital Roadmap aims to steer the digital transition that is taking place and strengthen Austria as a business location and innovation leader.
- **January 2016:** since January 2016, Austrian social insurance institutions are using the electronic delivery[31] for sending official notifications, which is another important step in the field of eDelivery.

3.1.3 *Country Specific Recommendations*

The CSR issued by the European Commission for Austria makes no specific mention of the need to intervene in the eGovernment and interoperability fields. An analysis of the CSRs and recitals, however, reveals areas in which digital solutions could be applied successfully. This is particularly true for recital 10[32], where references to the increasing costs of healthcare in the coming decades and an

[27] https://ec.europa.eu/digital-single-market/en/news/digital-economy-and-society-index-desi-2017
[28] Austria 2017 eGovernment factsheet, available at: https://joinup.ec.europa.eu/sites/default/files/ckeditor_files/files/eGovernment_in_Austria_March_2017_v_4_00.pdf
[29] openinnovation.gv.at
[30] www.bmi.gv.at
[31] www.zustellung.gv.at
[32] Refer to footnote 26.

over-reliance on hospital infrastructure instead of outpatient care, provides opportunities for the application of eHealth measures, especially with a view to reducing underlying costs. Staying within the realm of health, the same recital mentions that Austria does not sufficiently leverage the opportunities of EU-wide tendering and other forms of public procurement. The introduction of eProcurement measures could, in this respect, alleviate some of the structural weaknesses of the Austrian health system.

Furthermore, widening the availability of eGovernment services and increasing digital skills in general among the population, could help address other weaknesses in the Austrian economy, such as low business creation as cited by recital 16. The introduction of new digital services, geared for businesses, might facilitate the reduction of administrative barriers, especially for some professions.

3.1.4 *National Reform Programme*

The following link to TO11 highlights the main priority and planned measures in the eGovernment and interoperability domains identified in Austria's NRP[33].

Thematic Objective 11:

- **Enhancement of digital communication with businesses**: in its aim to reduce the bureaucratic burden on businesses and citizens, the Austrian government is harnessing eGovernment and more specifically, eBusiness measures. The government is introducing the right electronic communications, obligatory electronic delivery of official documents to business and eProcurement.

3.1.5 *Operational Programmes*

A thorough evaluation of Austria's OPs for the 2014-2020 financing period has revealed that there are no initiatives planned under TO2 and TO11 that would fall under the scope of this study.

[33] Austrian 2017 NRP, available at: https://ec.europa.eu/info/sites/info/files/2017-european-semester-national-reform-programme-austria-en.pdf

3.2 Belgium

3.2.1 *Socio-economic Outlook*

Economic Outlook

Belgium is currently in the preventive arm[34] of the Stability and Growth Pact and subject to the debt rule. In its 2017 Stability Programme, the government plans a gradual improvement of the headline balance from a deficit of 2.6% of GDP in 2016 to a deficit of 0.1% of GDP in 2020. The medium-term budgetary objective, set at a balanced budgetary position, is planned to be reached by 2019. After reaching 107% of GDP in 2014 and decreasing to around 106% of GDP in 2015 and 2016[35], the general government debt-to-GDP ratio is expected to decline further to 99% by 2020.

Public Investment and Innovation

Despite its potential to stimulate growth in the long run, public investment is low in Belgium by European standards, particularly public spending. Not only is the public capital stock low, the quality of public infrastructure has deteriorated. Given the tight budgetary constraints for all levels of government, preserving enough room for investment hinges on restructuring the composition of overall public spending by improving the efficiency. Higher productivity gains and broader investment in knowledge-based capital, notably digital technologies, are essential in this respect. In order to foster innovation in Belgium, more knowledge diffusion and more favourable conditions for innovation are necessary.

Economic and Administrative Barriers

Little progress has been made to remove barriers in retail. Following a reform, which transferred competences in the governance of the retail sector to the regions, new regional laws have been put in place simplifying administrative procedures. However, there is a lack of clarity in some provisions, which can lead to unjustified barriers. High regulation in the network industries and some professional services also restrict competition in Belgium, in particular for real estate agents, architects and accountants. Barriers include incompatibility rules prohibiting the exercise of any other economic activity for accountancy professions; limitations on real estate agents' access to the profession and voting rights restrictions. Reducing these barriers could generate more competition, resulting in benefits for consumers.

Fiscal Framework

Belgium has made some progress in reforming the tax system, shifting taxes from labour to other tax sources. Nevertheless, the tax system remains complex, with tax bases eroded by specific exemptions, deductions and reduced rates, leading to revenue losses, economic distortions and administrative burdens. There is still considerable scope for improving the design of the tax system by further broadening tax bases, allowing for lower statutory rates and fewer distortions. There is also considerable potential for a 'green' tax shift through the tax treatment of company cars and fuel cards to tackle congestion, air pollution and greenhouse gas emissions. The government currently envisages changes to the company car system.

[34] https://ec.europa.eu/info/business-economy-euro/economic-and-fiscal-policy-coordination/eu-economic-governance-monitoring-prevention-correction/stability-and-growth-pact/preventive-arm_en

[35] Recommendation for a Council Recommendation on the 2017 National Reform Programme of Belgium and delivering a Council opinion on the 2017 Stability Programme of Belgium, COM(2017) 501 final, Brussels, 22.5.2017.

3.2.2 *Country eGovernment and Interoperability Outlook*

Belgium enjoys a high score of 0.57 in eGovernment and Digital Public Services according to the most recent DESI report, ranking 13th overall in the EU, a position and score broadly similar to the previous year. The 'eGovernment Users' sub-dimension is where Belgium scored the highest, and ranked 10th in the EU-28, however it under-performs greatly in 'Open Data, ranking 21st in the EU[36].

The following are some of the eGovernment and interoperability highlights having occurred in Belgium since 2016:

- **September 2016:** the Belgian Region of Wallonia revised its geoportal by enhancing user experience and providing better access to data. Wallonia's geoportal aims to centralise the region's geographic data.
- **March 2016:** a hackathon for developing smart city apps, using public administration data, took place in Wallonia. The event brought together software developers, computer science students, entrepreneurs and start-up companies to encourage the region's citizens to become involved in creating services and use Open Data. The government of Flanders established *'Agentschap Informatie Vlaanderen'*, a government-wide information policy to support the region in its transition to a data-driven government.
- **January 2016:** the Belgian government relaunched its federal Open Data portal, 'data.gov.be', which contains two merged data portals, from Belgium's federal IT service agency, and the country's Agency for Administrative Simplification. The two agencies are now responsible for the Open Data Task Force, which is in charge of updating and monitoring the portal. The portal aggregates and updates links to several thousand datasets maintained by Belgium's public sector.

Among other interoperability highlights, Belgium introduced the BELGIF1 (BELgian Government Interoperability Framework) website as a new Interoperability Framework. This website was launched by the intergovernmental architecture workgroup (AWG).

3.2.3 *Country Specific Recommendations*

The CSRs for Belgium make direct references to the introduction of eGovernment measures such as CSR 3, which calls on Belgium to directly 'Foster investment in knowledge-based capital, notably with measures to increase digital technologies adoption, and innovation diffusion. Increase competition in professional services markets and retail, and enhance market mechanisms in network industries'. This can be seen as a call to implement measures related to 'Enhancing accessibility, use and quality of ICT by citizens', a key feature under TO2. More indirect opportunities in this field are similarly echoed in recital 16, calling for enhanced digital capabilities. Moreover, recital 20[37] showcases the importance of implementing significant tax reforms and, thus, the potential application of eTax measures. In recital

[36] Belgium 2017 eGovernment factsheet, available at https://joinup.ec.europa.eu/sites/default/files/ckeditor_files/files/eGovernment_in_Belgium_March_2017_v3_00.pdf
[37] Refer to footnote 35.

17 and 18, the CSR document makes the case for reducing administrative barriers that currently inhibit competitiveness and growth, which could be interpreted as an opportunity for the introduction of eGovernment services tailored to business, which could create new commercial opportunities for different sectors.

3.2.4 *National Reform Programme*

The following links to TO2 and TO11 highlight the main priorities and planned measures in the eGovernment and interoperability domains identified in Belgium's NRP[38].

Thematic Objective 2:

- **Enhancement of Digital Government:** the Digital Wallonia Action Plan[39] was launched on 2 November 2016. The Digital Wallonia Action Plan allocated funds for the financing of digital start-ups, education, high-speed mobile internet infrastructure, Open data, and eAdministration. Similarly, in the Brussels-Capital Region, the NextTech.brussels plan adopted in January 2017 aims to achieve the same objectives.
- **Advancement of eProcurement in Belgian regions**: within the framework of the Digital Wallonia Plan, progress has been made in creating paperless processes for public procurement tenders. Thirty-nine authentic source flows were completed in 2016, producing savings of EUR 9.8 million. The 2017-2019 'Responsible Public Purchasing Plan' ('*Achats publics responsables*') aims to facilitate access to public procurement contracts for SMEs.

Thematic Objective 11:

- **Tackling administrative simplification**: At federal level, the possibility is being investigated of transferring to one-stop shops for businesses some tasks currently performed by the registrars at commercial courts as part of the process of filing articles of associations and modifications to them by legal entities. The federal government is also exploring how the website www.business.belgium.be may be turned into an electronic one-stop shop allowing Belgian and foreign companies to electronically submit and monitor their accreditation and authorisation requests. Furthermore, the SBA and the NextTech.brussels plan, launched by the Brussels-Capital, aims to bolster service delivery through a single gateway for businesses.

3.2.5 *Operational Programmes*

A thorough evaluation of Belgium's OPs for the 2014-2020 financing period has revealed that there are no initiatives planned under TO2 and TO11 that would fall under the scope of this study.

[38] Belgium 2017 NRP, available at https://ec.europa.eu/info/sites/info/files/2017-european-semester-national-reform-programme-belgique-en.pdf
[39] https://www.digitalwallonia.be/wallonienumerique/

3.3 Bulgaria

3.3.1 *Socio-economic Outlook*

Economic Outlook

Bulgaria's CSR notes that it is currently in the preventive arm of the Stability and Growth Pact[40]. Based on the Commission 2017 spring forecast, the structural balance is forecast to deteriorate from a surplus of 0.1% of GDP in 2016 to a deficit of 0.4% of GDP in 2017 and 0.3% in 2018. Despite this deterioration, the structural balance is projected to remain above the medium-term budgetary objective in both years. Bulgaria is projected to comply with the provisions of the Stability and Growth Pact in 2017 and 2018[41].

Labour Market

Bulgaria's shadow economy remains extensive and undeclared work is still commonplace. Measures to cut red tape appear to have produced limited results so far and there are no indications of major improvements in voluntary tax compliance. The labour force continues to shrink because of population ageing combined with high emigration. Currently, the labour market is characterised by high long-term unemployment and inactivity, the exclusion of young people and skills' shortages.

Healthcare System

High costs, coupled with the emigration of professionals and weak health outcomes continue to be key challenges in the healthcare system. Low health insurance coverage, including in public coverage of outpatient medical services and high out-of-pocket payments, complicate access to healthcare. Measures, such as selective contracting of hospital services based on the National Health Map, have the potential to improve access to healthcare and equity, if implemented.

Fiscal Framework

Despite improvements, tax compliance remains a challenge. Moreover, the difference between income inequality before and after taxes and social transfers is among the smallest in the EU. The social protection system, including the general minimum income scheme, does not provide adequate levels of support. The coverage of social benefits remains low, driven by very restrictive requirements. The minimum income remains low and lacks a transparent adjustment mechanism.

Public Procurement

There is still need for continuing improvement in the public procurement system, despite recent reforms. Furthermore, the administrative capacity of the contracting authorities should be enhanced, including by drawing on support provided by the Public Procurement Agency and the Central Purchasing Bodies for the central administration, the municipalities and the health sector.

Judicial System

Bulgaria has adopted significant reforms to address continued concerns about the independence and quality of its justice system. However, it is too early to assess their impact, all while corruption remains a challenge and continues to weigh on investment, both at national and local level. Bulgaria's anti-corruption policy continues to be hampered by weak and fragmented institutions, a weak track record in prosecuting high-level cases and insufficient political backing for reform.

[40] https://ec.europa.eu/info/business-economy-euro/economic-and-fiscal-policy-coordination/eu-economic-governance-monitoring-prevention-correction/stability-and-growth-pact/preventive-arm_en

[41] Recommendation for a Council Recommendation on the 2017 National Reform Programme of Bulgaria and delivering a Council opinion on the 2017 Convergence Programme of Bulgaria, COM(2017) 502 final, Brussels, 22.5.2017.

3.3.2 *Country eGovernment and Interoperability Outlook*

Bulgaria has fallen from the previous year's ranking to become 25th in the EU in the 'Digital Public Services' dimension. However, its score has improved and is now at 0.40 for 'Digital Public Services'. Moreover, Bulgaria performed very well in the 'Open Data' sub-dimension ranking 7th in the EU. However, it performs less positively in all the other sub-dimensions.

The following are some of the eGovernment and interoperability highlights that have occurred in Bulgaria since 2016:

- **February 2017:** SEGA, the State eGovernment Agency, has launched its new website[42] – https://e-gov.bg.
- **January 2017:** Bulgaria's open data portal (https://opendata.government.bg) contained over 1,700 datasets from some 50 national and regional administrations and agencies.
- **December 2016:** SEGA aims to centralise all processes related to eGovernment. It is responsible for issuing and introducing control-related policies, rules, regulations and good practices in the field of electronic government, strategic planning, budget planning and control, coordinating all sector-related policies and interdepartmental projects. The agency is also responsible for maintaining the eGovernment central registers and information systems, the State Hybrid Private Cloud and the communication network of the State Administration.
- **November 2016:** a new Electronic Identification Act (EIA) came into force on November 2016 and amendments were made to the Bulgarian Identity Documents Act. This is a key step for the accelerated introduction of eGovernment as it defines a single national electronic identification scheme and regulates the public relations concerning individuals' electronic identification. Bulgaria will start issuing eID cards from January 2018.
- **June 2016:** the Electronic Government Act (EGA) was amended, creating the State eGovernment Agency (SEGA), which combines the eGovernment Directorate of the Ministry of Transport, Information Technologies and Communications with the Electronic Communication Networks and Information Systems Executive Agency.
- **April 2016:** Bulgaria adopted a roadmap for the implementation of the Strategy for the Development of eGovernment for the period 2016-2020. It outlines the measures and activities for the implementation of the strategic goals, as well as the institutions responsible and the financial resources required.
- **January 2016:** the Bulgarian government is making progress in offering electronic government services, reporting progress in providing online validation of documents and making these documents available online. In January 2016, a bill was published proposing changes to the Law on Electronic Documents and Electronic Signatures and bringing national

[42] Bulgaria 2017 eGovernment factsheet, available at: https://joinup.ec.europa.eu/sites/default/files/ckeditor_files/files/eGovernment_in_Bulgaria_April_2017_v4_00.pdf

rules in compliance with European legislation. The National Assembly also adopted a Law on Electronic Identification. The new law aims to unify the electronic identification of citizens through a technological solution with enhanced security.

3.3.3 *Country Specific Recommendations*

While not specifically stated in the recommendations, the recitals in the 2017 Bulgaria CSR do make a direct reference to the implementation of eProcurement tools to make the public procurement system more efficient but more importantly, transparent, in recital 16[43]. Moreover, the chronic issues relating to sustainability within the health service present an opportunity for the implementation of eHealth measures discussed in recital 13. Recitals 7 and 17 tackle the related issues of tax compliance and the judicial system as a way to reduce the shadow economy and corruption, which, in turn, offers opportunities for the application of eTax and eJustice measures to make these crucial institutional functions more effective.

3.3.4 *National Reform Programme*

The following links to TO2 and TO11 highlight the main priorities and planned measures in the eGovernment and interoperability domains in Bulgaria's NRP[44].

Thematic Objective 2:

- **Introduction of a pilot of eVoting:** the government plans to develop and implement a pilot system for remote electronic voting. It plans to develop and integrate the necessary information system and to subsequently conduct an experimental ballot.
- **Publication of government data as open data:** the Bulgarian government plans to publish its public information in an open, machine-readable format. The data sets that are required by the Directive on the Reuse of Public Sector Information (PSI Directive)[45] as well as those made upon on the initiative of public sector organisations will be made to the public. The government is aiming to make 2,100 datasets available to the public by December 2018.
- **Building of a government High Performance Computer (HPC)**: the Bulgarian government plans to build a government HPC, which would help to facilitate the digitisation of services in public administrations.

Thematic Objective 11:

- **Creation of a national INSPIRE portal:** as part of implementing the European INSPIRE Directive[46], the Bulgarian government will develop and implement a National Spatial Data Portal. The web portal will contain the following features: metadata storage of national spatial

[43] Refer to footnote 41.
[44] Bulgaria 2017 NRP, available at: https://ec.europa.eu/info/sites/info/files/2017-european-semester-national-reform-programme-bulgaria-en.pdf
[45] http://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX:02003L0098-20130717
[46] http://eur-lex.europa.eu/legal-content/en/ALL/?uri=CELEX%3A32007L0002

data, services related to the data, an online interface, and integration with the European INSPIRE portal.

- **Creation of an inventory for ICT resources**: with the aim of supporting the consolidation of eGovernance, the Bulgarian government will perform an audit of the ICT resources available at central and local administrations. The government will map the available infrastructure to be able to put in place a model for monitoring and creating an integrated ICT environment that would support eGovernance.

- **Upgrade of national registers**: by 2018, the government hopes to upgrade three national registers: the National 'Population' database, the National Electronic Register of Civil Status Acts and the Register of Identification Numbers.

- **Development of a centralised platform for civil servant recruitment**: the Bulgarian government will develop an online platform in order to simplify and optimise the civil service's recruitment and the promotion process. It is hoped that this platform will reduce the number of civil service appointments made without any competition or transparency.

3.3.5 *Operational Programmes*

For the funding period 2014 – 2016, Bulgaria has adopted two national OPs specifically dealing with the themes related to TO2 and TO11: 'Innovation and Competitiveness' under the ERDF and 'Good Governance'[47] under the ESF. These OPs recognise that one of the main challenges that Bulgaria faces is the persistently low efficacy of public administrations in providing quality, fast and affordable services for all groups of society.

The following section highlights the main priorities identified in the OPs linked to TO2.

Thematic Objective 2:

- **Digitisation of public procurement services**: in addition to horizontal eGovernment systems, particular attention is being paid to the implementation of sectorial systems, such as eProcurement in the 'Innovation and Competitiveness' OP[48], aiming to make communication within the sphere of public procurement entirely electronic.
- **Introduction of a standardised eID:** there are currently various institutions in Bulgaria providing different ID codes for access to their digital services. The Bulgarian government will leverage ESF funds to develop a universal eID and introduce it across all services.
- **Establishment of government cloud services:** with the help of the ESIF, Bulgaria is working to establish its own government cloud and developing single system integrators, given that currently Bulgaria's government portal of electronic administrative services does not yet function as a single point of contact.

[47] Good Governance OP, available at: http://archive.eufunds.bg/en/page/1011
[48] Innovation and Competitiveness OP, available at: http://www.opcompetitiveness.bg/images/filerepository/3733_OPIC_2014_2020_adopted_by_EC_16.03.2015_EN.pdf

- **Enhancement of access to open governmental data:** in order to achieve interoperability, under the 'Good Governance' OP, the government will open up its data in machine-readable format for public use. The government hopes that providing access to geographical, statistical and demographic data will help to promote an efficient and transparent use of public sector information.
- **Digitisation of the healthcare system:** the OP 'Good Governance' will support the establishment of centralised healthcare information standards and the consolidation and optimisation of key health registries. Complete health records for all Bulgarian citizens will be digitalised and electronic prescriptions will become available.

3.4 Croatia

3.4.1 *Socio-economic Outlook*

Economic Outlook

In its 2017 Convergence Programme, the government plans a gradual improvement of the general government balance from a deficit of 0.8% of GDP in 2016 to 0.5% surplus of GDP in 2020. The medium-term budgetary objective, set at deficit of 1.75% of GDP was met in 2016. The Convergence Programme expects the general government debt-to-GDP ratio to continue declining to 72.1% by 2020 from 86.7% of GDP in 2015. Coupled with an expected GDP growth of 2.9% in 2017 and 2.6% in 2018, the economic outlook seems stable and expansionary.

Fiscal Framework

Croatia's fiscal governance framework shows shortcomings and registers significant delays in implementing reforms. Croatia also collects relatively low amounts of revenue from recurrent property taxation. It also relies on the less-than-efficient taxation of property transfers. These factors contribute to Croatia not being able to optimise its collection of taxation effectively.

Labour Market

The labour market has been recovering, but unemployment is still high, with a high proportion of long-term jobseekers. Along with low and declining activity, this means there is a large untapped labour potential. Croatia also suffers from chronic factors affecting its workforce, such as a shrinking working-age population due to ageing and emigration. Participation in adult education is very low, as are expenditure and coverage of active labour market policies, retraining measures and lifelong learning. Training does not sufficiently focus on older and low skilled workers and the long-term unemployed.

Welfare System

Short contribution periods in Croatia also result in low current and future pension security and risks of old-age poverty. There are currently many pathways to early retirement, possible a full five years before the statutory retirement age. The social protection system displays shortcomings in effectiveness and fairness, stemming from fragmented geographical coverage, lack of coordination across authorities in charge and low transparency levels.

Economic and Administrative Barriers

Businesses in Croatia are burdened with high regulatory costs. A high number of parafiscal charges, many of which are statistically treated as taxes, complicate the business environment, despite recent reforms. Businesses continue to suffer from a considerable administrative burden. The modernisation of professional regulation can promote labour mobility and contribute to lowering prices for professional services, thereby increasing growth and competition.

Judicial System

The quality and efficiency of the justice system still has room to improve. Despite reduced backlogs, first instance court proceedings are lengthy in commercial, civil and criminal cases. The electronic filing and delivery of court documents has the potential to improve the justice system. Moreover, commercial judges cannot access registers online: this weighs on the efficiency of insolvency proceedings. Court judgments are only rarely available online, and case management reforms, such as updating business processes, have not yet been introduced.

3.4.2 *Country eGovernment and Interoperability Outlook*

In 2017, Croatia's score was mixed, obtaining the 26th rank in the EU but improving their score from 0.32 to 0.36. In terms of eGovernment, Croatia made some progress over the last year but fell back because other countries were progressing faster, which is true for most sub-dimensions. However, 'Open Data' is a sub-dimension where Croatia performs strongly, coming in 13th in the EU.

The following are some of the eGovernment and interoperability highlights that have occurred in Croatia since 2016:

- **October 2016:** following the Law on the Organisation and Scope of Ministries and Other Central Government Bodies, which entered into force in November 2016, there are now 20 Ministries and 5 State Offices[49] in Croatia. Of the two new State Offices, one is the Central State Office for the Development of the Digital Society, which will be tasked with development, standardisation and safety recommendations for the use of IT infrastructure and also the participation in the promotion and systematic improvement of network infrastructure in the Croatia. The new State Office will also be in charge of defining the activities and methodologies for monitoring progress and assessing the impact of policies for the development of a digital society.
- **May 2016:** the new Council for State Information Infrastructure is responsible for making recommendations for the implementation of investment in IT in the central state administration bodies and other state budget beneficiaries or extra-budgetary users of the state budget. The Council also monitors the implementation of all projects of the State Information Infrastructure (ProDII) and makes recommendations for merging similar ICT projects to the ProDII register. The Council is chaired by the Prime Minister of Croatia.

Furthermore, in the year 2016, the public register Metaregister, a collaborative tool for integration and development of the system of public registers, contained with a total of 185 registers and 80 web services. Metaregister ensures coordination within the change in the registration system and helps to maintain the so-called 'referential integrity'.

3.4.3 *Country Specific Recommendations*

Although not referring to them directly, the 2017 CSR for Croatia describes different situations in which eGovernment solutions of the TO2 or TO11 type could help overcome. This is particularly true for recital 22, which alludes to the slow processing time of the justice system in Croatia[50]. Taxes and regulation are cited in the document as a burden on Croatian business, such as in recital 19, which

[49] Croatia 2017 eGovernment factsheet, available at: https://joinup.ec.europa.eu/sites/default/files/ckeditor_files/files/eGovernment_in_Croatia_March_2017_v3_00.pdf
[50] Recommendation for a Council Recommendation on the 2017 National Reform Programme of Croatia and delivering a Council opinion on the 2017 Convergence Programme of Croatia, COM(2017) 510 final, Brussels, 22.5.2017.

offers clear opportunities the implementation of solutions such as eTax to simplify and to facilitate tax collection.

3.4.4 *National Reform Programme*

The following links to TO2 and TO11 highlight the main priorities and planned measures in the eGovernment and interoperability domains identified in Croatia's NRP[51].

Thematic Objective 2:

- **Provision of eServices for the social protection system:** to enhance the transparency and efficiency of its social protection system, Croatia hopes to integrate the welfare database (*SocSkrb IT*), containing its users' information into the eCitizen (*eGrađani*) system. There are plans to improve the functionalities of the eCitizen systems to ensure data exchanges from the social welfare system through the eCitizen system. It will now also be possible to apply for child allowance and maternity and parental leave support.
- **Creation of an eBusiness portal:** through the creation of the eBusiness (*ePoslovanje*) portal, the development of a large number of eServices for business users will be ensured. The Croatian government hopes that by including all eServices in one place, it will simplify and enhance the efficiency of government and business communication and information exchanges.
- **Completion of the eSpis system for courts:** the implementation of the eSpis system in the Supreme Court of Croatia will be completed, enabling electronic communication with all courts through the eSpis system. The introduction of eSpis will facilitate the distribution of cases to the judges of the Supreme Court. It will start with the upgrade of IT systems in courts. This and other related measures will enable electronic connectivity and electronic communication between judicial bodies and citizens, which will speed up court proceedings. An electronic record keeping solution will be introduced in certain jurisdictions, which will improve administrative capacity. Through these improvements, new eJustice services will be created.

Thematic Objective 11:

- **Improvement of Cadastre and Land Registry Systems**: by applying the already developed methodology, fully harmonised land registry data and cadastre information will be transmitted electronically to the land register (BZP). Partially harmonised data will be synchronised and transmitted to BZP by through a correction procedure involving non-institutional entities, non-harmonised data will be subject to regular reconciliation procedures.
- **Establishment of a Shared Service Centre for managing state IT**: the Croatian government plans to establish a Shared Service Centre as a unique strategic place for managing and coordinating state IT and rationalising IT expenditure through the oversight of budget

[51] Croatia 2017 NRP, available at: https://ec.europa.eu/info/sites/info/files/2017-european-semester-national-reform-programme-croatia-hr.pdf

resources. The establishment of single administrative locations, as physical and digital portals, will facilitate access to public administration services.

- **Creation of a business registry:** with the adoption of a new legislative framework to enable the electronic start-up of a business lays the foundation for the development of a new business registry. This will create a one-stop-shop system for fast start-ups and a number of other eServices, linked to the state information infrastructure. The government hopes that by enabling businesses to register online, the complexity of the procedure will be significantly reduced.

3.4.5 *Operational Programmes*

For the funding period 2014-2020, Croatia adopted two national OPs specifically dealing with the themes related to TO2 and TO11. The OP 'Competitiveness and Cohesion'[52] was approved for Croatia, with key links to TO2. The OP 'Efficient Human Resource Management'[53], under the ESF, has several initiatives that link to TO11.

The following section will describe key projects in both OPs linked to TO2 and TO11.

Thematic Objective 2:

- **Creation of a service centre to manage ICT systems and infrastructure:** the aim of the Centre is to eliminate the problems of inadequately managed ICT infrastructure in public administration. The Shared Service Centre will enable a rational and cost-efficient development of an interconnected and interoperable ICT system within the government administration as well as provide standards for the creation of digital public services.
- **Enhancement of the availability of governmental data:** in order to enhance the transparency, accountability and efficiency of public administration, new applications for functioning of public institutions will be developed in a consolidated manner. This coordinated development of ICT in public services data will make it more available to citizens.
- **Introduction of Digital Public Services based on Cloud Technology:** the ICT infrastructure necessary to operationalise cloud services will be introduced in order to improve the quality of communication between citizens and public administrations.
- **Digitisation of the healthcare system**: the OP 'Efficient Human Resource Management' states that efforts will be made to develop a standardised, integrated and interoperable information system in the healthcare sector, which would allow for online prescriptions, central patient data, online guidelines and other services.
- **Introduction of an integrated system for spatial planning:** ICT applications will be developed to support a database for the creation of spatial planning documents, construction procedures as well as to provide better access to the spatial information of the public sector.

[52] http://www.strukturnifondovi.hr/UserDocsImages/Novosti/Programme_2014HR16M1OP001_1_2_en.pdf
[53] http://www.esf.hr/wordpress/wp-content/uploads/2015/02/FINAL-OP-EHR.pdf

- **Establishment of ICT systems for digitising cultural heritage:** efforts will be made to establish a national ICT system, which will collect, process, store and distribute digitised cultural content. This will help the preservation of cultural heritage for generations to come.
- **Development of user-centric digital public services:** using ESF funds, efforts will be made to upgrade services available in the government portal for citizens and business in order to support a client-based approach.

Thematic Objective 11:

- **Enhancement of digital capabilities of public servants:** internal capacity building is crucial to the efficient functioning of public administrations, hence, ESF funds will also be directed towards strengthening of civil servants' ICT capabilities through the implementation of new and modern learning methods supported by ICT.
- **Interconnection of justice registries at national and EU levels:** in order to facilitate access to justice by citizens and businesses, a level of interoperability and interconnectedness of justice registries between both national and EU registries will be established.

3.5 Cyprus

3.5.1 *Socio-economic Outlook*

Cyprus is currently enjoying strong economic performances, with an expected growth level of 2.5% in GDP. In its 2017 Stability Programme, the government plans a budgetary surplus in headline terms over 2016-2020. The medium-term budgetary objective, to attain a balanced budgetary position in structural terms, is planned to be reached in 2017. The general government debt-to-GDP ratio is expected to have reached 107.8 % in 2016 before declining to 99.7% in 2018 and to 88.8 % by 2020.

Economic Outlook

The public sector in Cyprus has significant inefficiencies. Cyprus continues to face critical challenges within its judicial system. Inefficient court procedures and limited capacity regularly lead to delays in processing court cases, affecting the business sector and the functioning of foreclosure and insolvency frameworks. Backlogs and delays with issuing and transferring title deeds also remain significant, which contribute to undermining debt reduction efforts in the housing market.

Fiscal Framework

Unemployment remains high, especially among young people and the long-term unemployed. Plans to increase the numbers of counsellors in public employment services and improve their specialisation have not been implemented. As a consequence, there is still insufficient capacity to meet the needs of jobseekers, especially those having more difficulties to integrate in the labour market. The impact of active labour market programmes and support schemes is constrained by limited quality assessment and follow-up measures[54].

Labour Market

The Cypriot healthcare sector remains characterised by the lack of universal coverage and various levels of inefficiency, limiting access to adequate and effective care. Legislation aiming to create a national health system and provide public hospitals with greater autonomy is key to improving the capacity and cost-effectiveness of the healthcare sector.

Administrative Capacity

3.5.2 *Country eGovernment and Interoperability Outlook*

Cyprus performed moderately in 'Digital Public Services' according to the 2017 DESI report, ranking 17th in the EU overall and scoring 0.5, which corresponds to an improvement relative to last year. 'Online Service Completion' remains the weakest performance across all sub-dimensions, where it ranked only 22nd across the EU.

The following are some of the eGovernment and interoperability highlights that have occurred in Cyprus since 2016:

- **October 2016:** the Euroguidance network is a network of the National Resource Centres for Vocational Guidance that operates in each Member State, EEA Countries and the pre-accession countries, linking together the Careers Guidance systems in Europe[55]. Euroguidance promotes mobility, helping guidance counsellors and individuals to better

[54] Recommendation for a Council Recommendation on the 2017 National Reform Programme of Cyprus and delivering a Council opinion on the 2017 Stability Programme of Cyprus, COM(2017) 512 final, Brussels, 22.5.2017.
[55] Cyprus 2017 eGovernment factsheet, available at: https://joinup.ec.europa.eu/sites/default/files/ckeditor_files/files/eGovernment_in_Cyprus_March_2017_v1_00.pdf

understand the opportunities available to European citizens throughout Europe. Within this framework the Cyprus National Authority and the Department of Labour have launched the National Europe Guidance website, revealing education and training opportunities in Europe.

- **September 2016:** EURES is a cooperation network designed to facilitate the free movement of workers within the EU 28 countries plus Switzerland, Iceland, Liechtenstein and Norway. EURES Cyprus facilitates the movement of workers in and out of Cyprus through the mandate that is given to the network by the EU on a European network of employment services, workers' access to mobility services and the further integration of the EU labour markets. The EURES Cyprus Portal was reformed and launched in September 2016.
- **August 2016:** the National Interoperability Framework (NIF) of Cyprus was updated in August 2016 and it is now almost fully aligned with the EIF. It is 100% aligned in the categories of Principles and Interoperability Governance. Principles of Cyprus's NIF are 95.8% aligned with those of the EIF, followed by 94.4% alignment of Interoperability Levels and 90% alignment of Interoperability Agreements.
- **June 2016**: the new DLS Portal3, a new eServices platform of the Department of Lands and Surveys (DLS), was officially launched. The objective of the portal is to modernise the services provided to citizens by increasing the number of available eServices and easing the access to the DLS's data sources. An 'eApplications Dashboard' is available for every citizen, hosting personal profiling, and providing the ability to submit an application, purchase static maps, export data and upload data to the Department.
- **February 2016:** the meetings of Cyprus' Public Service Commission (PSC) have been enhanced digitally through the eCollaboration platform. The platform enables the automation of the internal processes related to the PSC meetings with the aim of increasing the efficiency of the meetings and minimising costs.

In addition, other interoperability highlights included Cyprus putting in place the Digital Strategy for Cyprus that sets out a comprehensive plan (for the period 2012-2020) for the development of information society in Cyprus and the uptake of ICT. Among other objectives, the Digital Strategy is focused on the modernisation of the public sector and provision of public electronic services.

3.5.3 *Country Specific Recommendations*

The 2017 CSR for Cyprus makes no direct reference to measures of eGovernment and interoperability that would fit into the framework of TO2 and TO11. However, given recurring inefficiencies in the justice system and the healthcare sector, eJustice and eHealth measures could address these to a considerable extent. Indeed, eHealth measures could improve coverage and reduce costs. On the other hand, eJustice measures, could help alleviate the backlogs and speed up some of the processes in the system.

3.5.4 *National Reform Programme*

The following links to TO2 and TO11 highlight the main priorities and planned measures in the eGovernment and interoperability domains identified in Cyprus' NRP[56].

Thematic Objective 2:

- **Simplification of a regulatory environment for business through eServices:** the Cypriot government hopes to harness eGovernment measures to improve the regulatory environment. The Tax Department is currently developing eServices for businesses operating in Cyprus. The new business portal would allow to register a new business online.
- **Extension of the Government Gateway Portal ARIADNI:** as part of the eGovernment Strategy, the Government of Cyprus hopes to add more digital services to the government portal 'ARIADNI'.
- **Development of eID:** the development of qualified electronic signatures and work is ongoing to ensure security of the electronic identification in Cyprus. The government plans to introduce the eID to the citizens of Cyprus in 2018.
- **Introduction of a Town Planning and Housing Information system**: the Cypriot government hopes that the system, which will upgrade many current procedures related to town planning, will reduce the bureaucratic burden. The system will be rolled out before 2018.
- **Development of an Integrated Health Information System:** Cyprus plans to roll out the eHealth system to all public hospitals and health centres across the country. A proposal has been submitted to the eGovernment Board of the Cypriot government for approval.

Thematic Objective 11:

- **Introduction of an eJustice system:** the Cypriot government has begun setting up a court administration information system. The system will contribute towards the digitisation of the administrative processes between legal, physical persons and the courts' administrations. The eJustice system should lead to a smoother and more effective functioning of the courts. The government plans that the system will be operational in autumn 2018.
- **Roll out of an Electronic Office Automation System (eOASIS):** it is hoped that the roll out of eOASIS, which will allow for electronic management of the official documents of the public services, will be completed in 2018. The system will help to make internal government operations much more efficient.

3.5.5 *Operational Programmes*

Cyprus' has confirmed one overarching OP 'Employment, Human Capital and Social Cohesion', which has several links to TO11. Cyprus's OP 'Competitiveness and Sustainable Development' has several

[56] Cyprus 2017 NRP, available at: https://ec.europa.eu/info/sites/info/files/2017-european-semester-national-reform-programme-cyprus-en.pdf

projects linking to TO2 as, under priority axis 2; it outlines plans to modernise the ICT infrastructure in the country and to expand eGovernment services available to citizens and businesses.

Thematic Objective 2:

- **Modernisation of ICT infrastructure in the country:** the aim is to improve ICT access in Cyprus through deployment of high-speed broadband networks. It is hoped that they will result in improved access for citizens and business to a wide range of eGovernment services.
- **Strengthening of ICT applications for eLearning, eInclusion, eCulture, and eHealth:** the government aims to increase the number and the quality of digital public services to businesses and citizens. Among other things, it aims to create an electronic management system for court cases, electronic processing of housing procedures and deploying electronic signatures to allow citizens to operate in the digital space.
- **Extension of an Integrated Health Information System:** the government is planning to further digitalise administrative procedures in public hospitals and health centres. It will also create a dedicated database to store all patients' files online.

Thematic Objective 11:

- **Enhancement of the efficiency of the agency for the management of welfare benefits**: the government of Cyprus plans provide IT training to its personnel and potentially deploy an electronic management system for welfare payments. The agency is responsible for the management and payment of the guaranteed minimum income scheme, ensuring an appropriate use of public resources.
- **Development of eGovernment information systems and applications:** to enhance connectivity between different departments of the public administration. The information systems developed will strengthen the sectors of justice, health and urban planning.
- **Creation of a Support Service System in the education sector:** the government of Cyprus plans to improve the efficiency in the education sector and to enhance the efficiency related to the performance of administrative tasks through the creation of a Support Service System.

3.6 Czech Republic

3.6.1 *Socio-economic Outlook*

Economic Outlook

The Czech Republic is currently in the preventive arm of the Stability and Growth Pact. In its 2017 Convergence Programme, the government plans for a budgetary surplus in headline terms over the period from 2016 to 2020. The medium-term budgetary objective — a structural deficit of 1.0% of GDP — continues to be met with a margin throughout the programme period. According to the Convergence Programme, the general government debt-to-GDP ratio is expected to gradually decline to 32.7% in 2020.

Public Procurement

The Czech Republic faces challenges in preventing corruption in public procurement. While the government has implemented a number of measures in the government's anti-corruption programme and other reforms are pending, corruption is still not prosecuted systematically. In general, Czech public procurement practices still lack sufficient competition, which is reflected by the high number of single bid procedures and direct awards, particularly in the IT sector.

Administrative and Economic Barriers

Regulations and barriers, in particular permits and tax payments, burden the business environment in the Czech Republic. In September 2016, the government streamlined the procedure for granting building permits. Tax compliance costs for businesses continue to be above the EU average and the system is still subject frequent modifications, generating insecurity. Addressing tax non-compliance remains a priority for the Czech authorities[57].

Labour Market

Tightening labour market conditions are making it more difficult for employers to recruit. There is potential to offset the shortages by mobilising women with young children and low-skilled workers. Increasing the outreach and activation capacities of public employment services, together with appropriate labour policies and individualised services could increase participation. The labour market participation of women with young children is hampered by the lack of childcare services, inadequate working-time arrangements and low take-up of parental leaves by fathers.

3.6.2 *Country eGovernment and Interoperability Outlook*

The Czech Republic has performed strongly in 2016 in terms of 'Digital Public Services', increasing its prank in the EU from 26th to 22nd, but also increasing its score from 0.29 to 0.44, which is a significant improvement.

The following are some of the eGovernment and interoperability highlights that have occurred in the Czech Republic since 2016:

- **November 2016:** the common concept for the operation and information centres of the national Integrated Rescue System was finalised. Furthermore, the modernisation of the regional integrated telecommunication networks (NGN) used by the Integrated Rescue

[57] Recommendation for a Council Recommendation on the 2017 National Reform Programme of the Czech Republic and delivering a Council opinion on the 2017 Convergence Programme of the Czech Republic, COM(2017) 503 final, Brussels, 22.5.2017.

System took place. These developments aim to bring higher quality, reliability and security to public services.

- **October 2016**: the Czech government approved an updated Action Plan on the Development of a Digital Market. This Action Plan includes five priorities (eSkills, eCommerce, eGovernment, eSecurity and General Data Protection Regulation, sharing economy and open data) and the horizontal priority 'Society 4.0'. The main feature of the plan is the establishment of a coordination mechanism for the digital agenda under the responsibility of the Government. While responsibilities remain with the competent Ministries, the Coordinator's role is to manage government activities and communication among the Ministries and institutions.
- **September 2016**: the Czech government and the ICT Union have launched the Initiative 202020[58], focusing on better promotion of existing eGovernment services and facilitation of the development of new services, in close dialogue with potential service users.
- **July 2016:** a Contract Register was introduced, which now promotes transparency in public funds management by providing a platform for the publication of contracts in which the state and other public subjects are parties in compliance with the Contract Register Act, which came into effect on 1 July 2016. Afterwards, contracts concluded with certain subjects, such as the state or state fund, etc., will be published in the register of contracts (the 'Register'). If a contract is not published in the Register within three months of its conclusion, it is considered invalid. The Ministry of Interior is responsible for the administration of the Contract Register.[59]

3.6.3 *Country Specific Recommendations*

The CSR makes an explicit mention of the use of eGovernment tools in recital 10, which states 'The use of e-government services in the Czech Republic is one of the lowest in the EU […] many (e-government services) are still in progress and some individual measures have not yet been initiated'. A more direct mention can be found in the Recommendation Nº2, which states that the Czech Republic should 'remove obstacles to growth, in particular by streamlining procedures for granting building permits and further reducing the administrative burden on businesses, by rolling out key e-government services […]'. The implementation of eGovernment services could notably help address some of the procurement issues described in recital 8, where eProcurement solutions can be envisioned as a corrective measure making the procurement system more transparent. All of the recommendations are directly linked to TO2.

3.6.4 *National Reform Programme*

The following links to TO2 and TO11 highlight the main priorities and planned measures in the eGovernment and interoperability domains identified in the Czech Republic's NRP[60].

[58] http://202020.cz/
[59] https://smlouvy.gov.cz/
[60] Czech Republic 2017 NRP, available at: https://ec.europa.eu/info/sites/info/files/2017-european-semester-national-reform-programme-czech-republic-cs.pdf

Thematic Objective 2:

- **Implementation of eGovernment cloud**: on the basis of Government Resolution No. 1050 of November 2016, the 'Strategic Framework of the National Cloud Computing - eGovernment cloud of the Czech Republic' was approved and work on the preparatory phase has begun. To this end, a 'Working Group on the Preparation of the eGovernment cloud' was set up within the Government Information Society Council to participate in the implementation of this project and to submit a comprehensive analytical report to the government by the end of 2017.
- **Finalisation of the submission of electronic documents:** one of the priorities in the development of eGovernment in the Czech Republic is to ensure complete electronic document submission to public administration. This will increase both the quality of services provided by public administration bodies and of user engagement in the Czech Republic.
- **Implementation of the eIDAS Regulation[61]:** work is continuing on building an information system to serve electronic submission and electronic identification not only at national level but also compatible with cross-border systems
- **Introduction of a National Identification and Authentication Point:** an information system is currently in the construction phase for the establishment of a National Identification and Authentication Point. It is expected to be set up and launched prior to the entry into force of the Electronic Identification Act[62] expected on July 1, 2018.
- **Passing of a law laying basis for the introduction of eID in the Czech Republic:** on 7 April 2017, at the third reading in the Chamber of Deputies, a bill was passed amending the Act on Citizens' Records. According to the law, the 'new' electronic identity card will be equipped with a contact electronic chip on which the identification card will be recorded, becoming the basic tool for citizen authentication.
- **Introduction of eLegislation:** the Czech Republic has begun the development of a new information system, which would allow for the verification of the validity of electronic legal documents. It is expected that such a system will facilitate the publication of valid and effective law in the Czech Republic in an electronic format, and will facilitate greater transparency and accessibility.
- **Expansion of the Public Administration Portal (PVS):** PVS provides high-quality digital services and helps to simplify communication with Czech public authorities for its citizens and foreigners. The government plans to add a user interface, which would allow users to submit or fill-in electronic documents to the public authorities.

[61] Regulation (EU) No 910/2014 of the European Parliament and of the Council of 23 July 2014 on electronic authentication and trust services for electronic transactions in internal and repealing Directive 1999/93/EC.
[62] https://www.zakonyprolidi.cz/cs/2017-250

Thematic Objective 11:

- **Launch of the National ICT Architecture Plan:** the plan aims to introduce a single structured description of public administration services through IT architectural tools and to create the information base for the management of shared services through a common architecture.

3.6.5 *Operational Programmes*

For the funding period 2014-2020, the Czech Republic has adopted one OP 'Integrated Regional Operational Programme', which targets both TO2 and TO11. The third priority area of the OP, 'Good governance of the territory and streamlined public institutions' includes multiple reforms related to eGovernment and interoperability.

The following section will highlight the key projects relating to TO2 and TO11:

Thematic Objective 2:

- **Digitisation of cultural heritage:** efforts will be made to better preserve and promote national cultural heritage through the process of digitisation. Primary attention will be paid to digitising key national collections.
- **Digitisation of the healthcare system:** under the OP further digitisation of the healthcare system will take place. Funds will also be directed towards making the healthcare information system more interoperable between different institutions.
- **Simplification of the public procurement portal:** the government plans to modify its info-forum of the Public Contracts and Concessions Portal[63] to make it easier to find specific information related to public tender procedures and best practice[64].

Thematic Objective 11:

- **Enhancement of interoperability across public administrations:** efforts will be made to further extend, interconnect and consolidate public administrations' ICT systems in order to enhance the interoperability within the country and with public administrations across the EU, make self-service processes within public administrations easier and to make data held by different public organisations more interconnected.
- **Strengthening of cybersecurity of the public sector:** under the 'Integrated Regional Operational Programme' support will be granted to establish and provide better equipment for protection of ICT infrastructure and insurance of the controlled and secure sharing processes of public data.

[63] http://www.businessinfo.cz/cs/clanky/verejne-zakazky-ppbi-51137.html#!andchapter=1
[64] http://www.strukturalni-fondy.cz/getmedia/207ddc91-a4de-42ff-9d98-27cdf9ef4c5a/PD-IROP-20150604-schvalen-EK_2.pdf?ext=.pdf

3.7 Denmark

3.7.1 *Socio-economic Outlook*

Economic Outlook

Denmark is currently in the preventive arm of the Stability and Growth Pact. In its 2017 Convergence Programme, the government plans to achieve a headline deficit of 1.9% of GDP in 2017 and meet the medium-term budgetary objective — a structural deficit of 0.5% of GDP — throughout the programme until 2020. According to the Convergence Programme, the general government debt-to-GDP ratio is expected to fall to 37.0% in 2017 and to continue declining to 33.9% in 2020[65].

Labour Market

Ensuring labour supply in times of demographic decline and ageing in Denmark is a precondition for its sustainable economic growth. A series of reforms in recent years aims particularly to increase work incentives and improve the efficiency of active labour market policies. These reforms could help Denmark achieve the Europe 2020 targets and aid the sustainability of the Danish welfare model, while also addressing the emerging shortage of skills is in some sectors. Reforms and agreements increasing the participation in vocational education, aim to increase the supply of workers.

3.7.2 *Country eGovernment and Interoperability Outlook*

With a score of 0.74 in 'Digital Public Services', Denmark is the 4th country in the EU-wide ranking in terms of eGovernment provision. Its weakness remains 'Open Data', where the country ranks 24th, but this seems to be due to a transition to a new Open Data Portal[66].

The following are some of the eGovernment and interoperability highlights that have occurred in the Denmark since 2016:

- **November 2016:** a new self-evaluation tool on ICT security for SMEs was launched. The Danish Business Authority and the Council for Digital Security, an independent Danish NGO developed the new tool.
- **October 2016:** the National Council for IT Projects, DI Digital (a trade organisation within the Confederation of Danish Industry), the Danish IT Industry Association (ITB), Dansk IT (an association for IT professionals), IT suppliers and government authorities, launched a new Code of Conduct for customer supplier collaboration. The Code of Conduct contains seven principles to ensure good relations between customers and suppliers of IT projects.
- **July 2016:** companies operating in Denmark are mandated by law, from now on, to register any changes to their status regarding their creation, changes or their abolishment in Denmark's digital register[67].
- **April 2016:** all operational information on common public sector components and systems was successfully transferred to the communication platform 'www.digitaliser.dk'. The platform

[65] Recommendation for a Council Recommendation on the 2017 National Reform Programme of Denmark and delivering a Council opinion on the 2017 Convergence Programme of Denmark, COM(2017) 504 final, Brussels, 22.5.2017.
[66] Denmark 2017 eGovernment factsheet, available at: https://joinup.ec.europa.eu/sites/default/files/ckeditor_files/files/eGovernment_in_Denmark%20_March_2017_v2_00.pdf
[67] https://erhvervsstyrelsen.dk/selskaber-skal-indberette-digitalt-fra-1-juli

is aimed at ICT professionals and stakeholders working with public sector digitisation. The information transferred includes information on 'Easy ID' (the Danish digital signature solution – *NemID*), Digital Post, borger.dk (the Danish citizen's portal), 'Easy Login' (the Danish single-login solution – *NemLogin*), *NemHandel* (the Danish eCommerce infrastructure) amongst others. Surveys reveal that users are highly satisfied with these.

- **March 2016:** the new Business Council for ICT Security was officially created. The goal of the Council is to develop recommendations for private sector entities on how to improve their ICT security and corresponding data management. The national dissemination of telemedicine for chronic obstructive pulmonary disease patients was also launched nationwide, allowing patients to measure their blood pressure, weight and oxygenation in their own home. Allowing health professionals to monitor patients at the same time.
- **February 2016:** the Danish Business Authority and the Agency for Digitisation became partners of the Danish Centre for Big Data Analytics driven Innovation (DABAI). DABAI is a newly created community partnership that aims to give Denmark a leading role in utilising and unlocking the potential of Big Data.

In addition, as of March 2017, Denmark's Ministry of Justice wants to start sending court summonses using Digital Post, the country's eGovernment messaging system. To make this possible the law must be updated, and the Ministry will submit a proposal to the Parliament. The Ministry expects the change will free up time of some 25 to 30 police officers and will speed up the court's processing of cases.

3.7.3 *Country Specific Recommendations*

The 2017 CSR for Denmark makes little or no mention of the need to implement measures related to TO2 or TO11, nor are any real opportunities for their application discernible in direct recommendations and recitals.

3.7.4 *National Reform Programme*

The following links to TO2 highlight the main priorities and planned measures in the eGovernment and interoperability domains identified in Denmark's NRP[68].

Thematic Objective 2:

- **Support for young students online:** a digital tool (*Uddannelseszoom*) has been established to give future students easy access to comparable information about e.g. unemployment figures and job opportunities relating to the various education programmes. From 2017, *Uddannelseszoom* comprises assessments made by students and graduates of the quality of their education programmes.

[68] Denmark 2017 NRP, available at: https://ec.europa.eu/info/sites/info/files/2017-european-semester-national-reform-programme-denmark_da.pdf

- **Promotion of social inclusion through digital means:** effective eInclusion methods are made available on vidensportalen.dk (Knowledge Portal) by the National Social Board under the Ministry of Children and Social Affairs.

3.7.5 *Operational Programmes*

A thorough evaluation of Denmark's OPs for the 2014-2020 financing period has revealed that there are no initiatives planned under TO2 and TO11 that would fall under the scope of this study.

3.8 Estonia

3.8.1 *Socio-economic Outlook*

Economic Outlook

Estonia is currently in the preventive arm of the Stability and Growth Pact. In its 2017 Stability Programme, the government lowered its medium-term budgetary objective from a structural balance to a deficit of 0.5% of GDP. The government plans to move from a general government surplus of 0.3% of GDP in 2016 to a deficit of 0.5% of GDP in 2017 and 0.8% of GDP in 2018.

Unemployment and Pay-Gap

The gender pay gap in Estonia fell from 28.3% in 2014 to 26.9% in 2015 but is still the highest in the Union. The government is taking steps to further narrow the gender pay gap. In particular, the 2016-2023 Welfare Plan has been adopted and is being implemented to tackle gender segregation in the labour market and to fight stereotypes[69].

Inequality

Income inequality in Estonia is high. The ratio of incomes of the richest 20% of households to that of the poorest 20% rose from 5.4 in 2012 to 6.2 in 2015, and is now the seventh highest in the EU. In absolute terms, the income of the poorest 10% of households lagged behind growth in median incomes, leading to problems in the social safety net. A contributing factor is that benefits (pensions, social assistance and unemployment benefits) are not aligned with the growth in market incomes. This has resulted in the increase of the at-risk-of-poverty rate, from 15.8% in 2010 to 21.6% in 2015.

3.8.2 *Country eGovernment and Interoperability Outlook*

In 2017, Estonia achieved the remarkable position of being the top performer in the EU-28 and a score of 0.84. Indeed, both constituted an improvement from last year, however, 'Open Data' could improve as Estonia remains only 17th in this sub-dimension. Nonetheless, Estonia has become a role model in Europe when it comes to facilitating citizens' lives and developing creative digital solutions in and for the public sector.

The following are some of the eGovernment and interoperability highlights that have occurred in Estonia since 2016:

- **November 2016:** a new NGO was created with the purpose of promoting interoperability solutions in Nordic countries. It has taken then shape of a Nordic Council dedicated to the promotion of interoperability.
- **October 2016:** the parliament adopted Estonia's X-Road platform v.6[70]. The same month saw the 15th anniversary of the introduction of the first X-Road platform in Estonia. The effective transposition of the EU's eIDAS Regulation was introduced, with the adoption of the new electronic identification and trust services law. In the context of the implementation of Estonia's eResidency programme, the law on the Requirements and procedure for identification of persons and verification of persons' identity through ICT means[71] was adopted.

[69] Recommendation for a Council Recommendation on the 2017 National Reform Programme of Estonia and delivering a Council opinion on the 2017 Stability Programme of Estonia, COM(2017) 506 final, Brussels, 22.5.2017.
[70] https://e-estonia.com/solutions/interoperability-services/x-road/
[71] https://www.riigiteataja.ee/en/eli/504112016001/consolide

- **September 2016:** Estonia's 'Zero Bureaucracy Initiative' was established. Its main objectives are to eliminate unnecessary requirements and reduce the administrative burden on businesses and the public sector. This new initiative emphasises the 'once-only' principle.
- **August 2016:** Estonia is pursuing the introduction of a new eGovernment cloud, which is a developing concept within Estonia's wider eGovernment strategy, aimed at reducing costs in Estonia's municipalities.
- **January 2016:** a meeting was held between the Finnish and Estonian governments to discuss cooperation, review the X-Road experience and find new avenues of cooperation between the two countries, especially in cross-border service delivery.

Estonia is widely considered as a good example for the delivery of eGovernment services and interoperability initiatives. According to the European Union eGovernment Benchmark report 2016[72], other countries should follow the steps that Estonia has taken in eGovernance and the availability of online services to the public.

3.8.3 *Country Specific Recommendations*

The 2017 CSR for Estonia makes little or no mention of the need to implement measures related to TO2 or TO11, nor are any real opportunities for their application discernible in direct recommendations and recitals.

3.8.4 *National Reform Programme*

The following links to TO2 and TO11 highlight the main priorities and planned measures in the eGovernment and interoperability domains identified in Estonia's NRP[73].

Thematic Objective 2:

- **Promoting the re-use of Open Data:** developing a strategy for re-use of Open Data and promote the re-use and access of public sector data, including the creation of the appropriate infrastructure.
- **Providing digital services in foreign languages:** labour market-related information and information on working in Estonia to be made available on the websites of the Estonian Unemployment Fund and EURES in English and on the website of the Unemployment Fund in Russian.
- **Introduction of a digital youth support system for young unemployed:** a guarantee support system for 'NEETs', young people who are no longer in the education system and who are not working or are being trained for work is being established. Work has started on developing the IT solution and administration model, which will be tested in 2018-2019.

[72] 2016 eGovernment Benchmark Report, available at: http://ec.europa.eu/newsroom/dae/document.cfm?action=display&doc_id=17855
[73] Estonia 2017 NRP, available at: https://ec.europa.eu/info/sites/info/files/2017-european-semester-national-reform-programme-estonia-en.pdf

Thematic Objective 11:

- **Introduction of new technologies:** proactively analysing the legal framework and promotion of the state information system, in order to support the initial testing and introduction of smart technologies (e.g., The Internet of Things, Linked Data).
- **Establishment of a digital registry:** establish an inventory of local roads in order to determine their conditions and traffic loads and to establish a national database of the network of national and local roads and streets under the National Register of Roads.
- **Development of an electronic data exchange:** development of an electronic data exchange related to social insurance between the EU Member States, so that people would be assured of rapid solutions for cross-border cases related to social insurance.

3.8.5 *Operational Programmes*

For the funding period 2014-2020, Estonia has adopted one national OP specifically dealing with the themes related to TO2 and TO11. The 'Operational Programme for Cohesion Policy Funds 2014-2020'[74] was approved for Estonia.

The following section will describe key projects in both OPs linked to TO2 and TO11.

Thematic Objective 2:

- **Adoption of new technologies:** the government's ICT policy aims to foster the competitiveness of enterprises through a well-functioning infrastructure, enabling the creation of personalised services more quickly. The service infrastructure of the state (X-Road, eID, information portals etc.) has been developed, but the government recognises it still needs to be updated in view of technological change (cloud technology, social media, mobility and increased amounts of information) and future innovations (the Internet of Things, improved analytics, linked data, virtual reality etc.).
- **Enhancement of eService infrastructure:** Estonia aims to ensure that both enterprises and citizens can use electronic services (e.g. digitally sign contracts or share health records) across borders, allowing cross-border interoperability. The expected outcomes include interoperable information systems (e.g. in the social sphere) and arranged data, which will make it possible to create new linked services, facilitating cross-border data exchange. New ICT applications will be made possible for eGovernment, eLearning, eInclusion, eCulture and eHealth.
- **Provision of services to rural areas:** as the population of rural areas continues to decrease, while that of larger urban areas increases, the rural population becomes more dependent on cities. The decline is raising the cost of providing public services in these areas and thus puts

[74] Operational Programme for Cohesion Policy Funds 2014-20, available at: https://www.struktuurifondid.ee/sites/default/files/2014-2020.pdf

pressure on their availability and quality. To adapt to realities, Estonia plans to study and implement non-traditional solutions, including e-solutions, where possible.

Thematic Objective 11:

- **Strengthening cybersecurity:** Estonia is keenly aware of the risks of cyber-attacks, which is why the government is investing heavily in secure information systems, high level measures to increase cyber security, reliable eGovernance, the capacity to block attacks, while still allowing public sector data to be available to enterprises, citizens and institutions to the maximum extent possible.
- **Enhancement of administrative capacity:** Estonia plans to analyse service provision processes and agreements on common quality requirements, covering central and local level governance, with the aim of producing less cumbersome services created collaboratively. The development of public services with the help of ICT will be based on customer needs. The investment priority addressing the infrastructure of services will mainly focus on the development of interoperable components (building blocks) of the state information system.

3.9 Finland

3.9.1 *Socio-economic Outlook*

Economic Outlook

Finland is currently in the preventive arm of the Stability and Growth Pact and subject to the debt rule. The government expects a deterioration in the headline balance from deficit of 1.9% of GDP in 2016 to that of 2.3% in 2017, followed by an improvement, reaching a deficit of 0.2% in 2020[75]. According to the Stability Programme, the general government debt-to-GDP ratio is expected to peak at 64.7% in 2017 and to decline to 62.7% in 2020. The macroeconomic scenario underpinning these budgetary projections appears to be favourable as growth rates are expected to be 1.3% and 1.8% in 2017 and 2018, respectively.

Ageing Population

Due to an ageing population and declining workforce, expenditure on pensions, healthcare is set to increase from 23% of GDP in 2013 to 27% by 2030. The costs of social and healthcare services, currently a responsibility of the municipalities, amount to 10% of GDP. Expenditure is set to grow by 2.4% annually in the coming years in nominal terms. The reforms aim to reduce the long-run sustainability gap in public finances through better control of costs. This can be achieved through the integration of services, providers of services and digitisation.

Labour Market

The labour market situation is improving gradually. Sectors such as construction, real estate and healthcare, are showing signs of labour shortages. This highlights the need for targeted active labour market policies and continued investments in training to enable occupational mobility. There may be signs of mismatches between labour demand and supply, low attractiveness of certain vacant jobs or limited incentives to take up work. Continued efforts are needed to ensure better outcomes for the inactive, especially the young and the long-term unemployed.

Welfare State

A complex benefits' system in Finland, with many different types of allowances, can result in inactivity and low wage traps, as well as bureaucratic problems. To increase the incentives to accept job offers, the obligation for the unemployed to accept them and the obligation to participate in activation schemes have been tightened. In addition, positive incentives, such as allowing the use of basic unemployment benefit as mobility and wage subsidies to activate jobseekers, were introduced.

Business Environment

Non-cost competitiveness hinders export performance and may limit foreign direct investment. Structural changes are still needed, such as opening up services including retail, trade and transport to competition. While international comparisons rank Finland among the leading countries in the world in terms of its business environment, the existing stock of inward investments in Finland is below the EU average when compared to the size of the economy.

3.9.2 *Country eGovernment and Interoperability Outlook*

Finland ranks second in ‘Digital Public Services’ with a very high score of 0.82. In addition, Finland seems to perform well in all sub-dimensions without significant outliers. The government is continuing

[75] Recommendation for a Council Recommendation on the 2017 National Reform Programme of Finland and delivering a Council opinion on the 2017 Stability Programme of Finland, COM(2017) 525 final, Brussels, 22.5.2017.

to drive the digitisation of public services, including local government. Following the development of the common principles for digital public services, the government is investing in administrative branches and local authorities to commit to client-oriented automation and digitisation.

The following are some of the eGovernment and interoperability highlights that have occurred in Finland since 2016:

- **December 2016:** a new Act on Public Procurement was approved, which is based on the EU public procurement Directives[76]. The new legislation gives contracting authorities better possibilities for making procurement more innovative, sustainable and of higher quality.
- **September 2016:** the new version 1.3 of Finland's service catalogue, suomi.fi, is currently in development. The service catalogue will include an organisation register, with service descriptions (including base descriptions) for municipalities' welfare services. It will also provide service channel descriptions (eServices, service points, forms and information services, permits) and make use of an Open API programming interface published to GitHub. Offering content in Finnish, Swedish and English, training will also be provided to relevant public servants to ensure the correct delivery.
- **July 2016:** the Ministry of Finance launched the AUTA-HELP project to develop a new model for customer services through experimentation. The project is based on the objectives set in the Government Programme concerning the digitisation of public services, the provision of assistance in delivering services. The purpose of the model being developed, is to offer flexible forms of support to help customers who have difficulties in using digital services on their own.
- **May 2016:** the Finnish and Estonian governments signed a joint declaration, committing to making the data on their respective databases available and interchangeable for citizens and business across the two countries, ensuring cross-border services across the Gulf of Finland. This is possible due to the technical similarities between the Finnish Palveluväylä and Estonia's X-Road systems. Both sides will work jointly to agree the first concrete business cases, steps and deadlines, by the end of 2016, for launching automated data exchanges.
- **January 2016:** Finland will use international digital security company Gemalto, to introduce its new generation of electronic passports and secure eIDs that can be used to access social security services.

3.9.3 *Country Specific Recommendations*

The 2017 CSR for Finland makes little or no mention of the need to implement measures related to TO2 or TO11, except for a mention in recital 13, where digitisation is proposed as a solution to

[76] https://ec.europa.eu/growth/single-market/public-procurement/rules-implementation_en

reduce public expenditure in social care. The recital is closely linked to the eGovernment services domain of TO2.

3.9.4 *National Reform Programme*

The following links to TO2 and TO11 highlight the main priorities and planned measures in the eGovernment and interoperability domains identified in Finland's NRP[77].

Thematic Objective 2:

- **Improvement of digital social and health services:** to improve healthcare and social welfare as well as integration of basic and specialised services. A specific reform will implement a client-oriented service integration, aimed at delivering a comprehensive assessment of clients' needs and ensuring the timely implementation of services. To achieve this, the reform aims to facilitate sharing of client and patient data, to develop new electronic public services, and to simplify the financing of health and social services.
- **Introduction of online counselling for young unemployed:** in addition to face-to-face counselling, an online counselling service will be developed as part of a 'labour market forum', namely a national recruitment platform, organised by public employment and business services. A pilot was launched in 2017 and is due to undergo further expansion in 2018. The online counselling service is intended to be fully operational by the end of 2019.

Thematic Objective 11:

- **Digitisation of public transport:** a newly adopted act will renew provisions on the professional transport of passengers and goods by road, and will require the digitisation of road and rail transport services. To support innovation, the provisions will be prepared to be technologically neutral. Regulation will be harmonised and operators' administrative burden eased. The new requirement for operators to digitise their essential transport data will further foster digitisation.

3.9.5 *Operational Programmes*

A thorough evaluation of Finland's OPs for the 2014-2020 financing period has revealed that there are no initiatives planned under TO2 and TO11 that would fall under the scope of this study.

[77] Finland 2017 NRP, available at: https://ec.europa.eu/info/sites/info/files/2017-european-semester-national-reform-programme-finland-en.pdf

3.10 France

3.10.1 *Socio-economic Outlook*

Economic Outlook

France is in the corrective arm of the Stability and Growth Pact. In its 2017 Stability Programme, the government plans to correct the excessive deficit by 2017 to a headline deficit of 2.8% of GDP. The headline deficit is planned to decline further to 1.3% of GDP in 2020. According to the Stability Programme, the general government debt-to-GDP ratio is expected to decrease from 95.9% of GDP in 2018 to 93.1% of GDP in 2020. The growth prospects for France appear positive, with growth forecast to reach 1.4% and 1.8% in 2017 and 2018 respectively[78].

Public Spending

The level of public spending, however, remains one of the highest in the EU. The expenditure ratio is projected to reach 56.2% of GDP in 2017, which is 9.7% higher than in the EU-28. France has followed an expenditure-based consolidation strategy that has relied mainly on declining interest rates and cuts in public investment. It is unlikely that the low interest rate environment will prevail in the medium term and investment cuts could harm future economic potential.

Social Contributions

High social contributions and high taxes weigh on companies, which discourage private investment and hamper companies' growth. To tackle this, the government has increased the tax credit for competitiveness and employment from 6% to 7%. These measures aim to reduce the labour tax wedge and improve France's competitiveness, but further efforts are required. At 38.4 % in 2016, the effective corporate tax rate remains the highest in the EU and other taxes on production are high. At the same time, the tax burden continues to fall less on consumption than in other EU Member States.

Labour Market

While decreasing, unemployment remains high among young people, the low-skilled and non-EU migrants. In parallel, jobseekers, less qualified workers and SME employees face persistent difficulties in accessing training. The female employment rate was one of the lowest in the EU. The employment gap between non-EU born and French born people also stood at 17.5%. In order to address these challenges, a comprehensive strategy is necessary, including upskilling and training, job counselling and other forms of targeted active labour market policies.

Regulatory Framework

Although France has improved its regulatory performance, businesses still face a high regulatory burden and fast-changing legislation, hindering private investment. With the simplification programme, France has taken steps to reduce red tape but a significant amount of measures has not yet been implemented. Competition in services has improved in many sectors but some sectors, such as accountancy and architecture among others, are characterised by regulatory obstacles and these limit effective competition and better services.

Research and Innovation

Innovation in France does not match the performance of some of its European peers. The discrepancy between the amount of public support granted and France's innovation performance raises questions about the efficiency of public support mechanisms. In particular, cooperation between public research and companies is low and weighs on the economic output of the innovation system.

[78] Recommendation for a Council Recommendation on the 2017 National Reform Programme of Finland and delivering a Council opinion on the 2017 Stability Programme of France, COM(2017) 509 final, Brussels, 22.5.2017.

3.10.2 *Country eGovernment and Interoperability Outlook*

France has improved its score in 2017 from 0.60 to 0.65, while preserving the same overall rank in the EU[79]. On the one hand, France performs very well with regard to 'Open Data', ranking second. On the other hand, its weakest dimension is the 'Use and Completion of Pre-Filled Forms' where it ranks 22nd. Its performance is average in the other sub-dimensions.

The following are some of the eGovernment and interoperability highlights that have occurred in France since 2016:

- **March 2017:** France launched a platform called https://mes-aides.gouv.fr/ - this platform allows French citizens to evaluate online whether they can benefit from 24 different social services at both national and local levels. The launch of the new platform is part of a strategy aimed at developing new public services, through the sharing of information between different public administrations and the participation of users.
- **December 2016:** France, which co-chairs the Open Government Partnership, hosted the OGP Summit in December 2016 where the Paris Declaration for Open Government[80] was proclaimed. The Paris Declaration reiterates the principles of open and transparent government through civic consultation and participation, increasing access to new technologies to foster democracy, promote innovation and stimulate progress.
- **October 2016:** the government passed a new Digital Republic bill. Contributors had been able to comment on the text's articles and suggest amendments, which were then open to remarks from Internet users. Contributors also had the chance to propose changes to the Bill.
- **September 2016:** a Hackathon took place in Paris on 17 and 18 September, where Etalab and the CNNum (*Conseil National du Numérique*, the National Digital Council) presented their plan to collaborate with civil society members and the Open Government ecosystem in France to develop a new political consultation platform, to draft new laws and regulations. The platform, published as an open source software, allows national public consultation to be easily utilised by public authorities, ministries and local agencies.
- **July 2016:** the Insee, the French public institute for statistics, and DREES (*Direction des études du Ministère des Affaires sociales et de la santé*), published the source code of the microsimulation algorithmic model called Ines. Ines simulates the impact of social and fiscal regulations in France, assessing the budgetary and redistributive impact of many social tax and benefit reforms. Also in July, France's national Computer Science Institute, Inria[81], unveiled its 'Software Heritage' archive. The project aims to 'collect, organise, preserve, and make accessible all the source code for all available software.

[79] France 2017 eGovernment factsheet, available at: https://joinup.ec.europa.eu/sites/default/files/ckeditor_files/files/eGovernment_in_France%20_March%20_2017_v6_00.pdf
[80] https://www.opengovpartnership.org/paris-declaration
[81] https://www.inria.fr/en/

- **June 2016:** the French government launched the France Connect system. The system enables users to access online digital services through websites affiliated with the system. France Connect effectively applies the 'only-once' principle. The api.gouv.fr portal was launched in June as well. This constitutes the first French Application Programming Interface (API) portal, and comprises APIs offered to government agencies and private enterprises to embed government services.
- **April 2016:** the *Référentiel Général d'Interopérabilité* (RGI) v2.0, which is the French National and Interoperability Framework, became applicable to administrations. This new version is one of the four general standards that apply to French authorities, the other three being: the General Security Repository – RGS; the General Repository for Administration Accessibility – RGAA; the General Repository for Archive Management - R2GA.
- **February 2016:** the Etalab mission, within the General Secretariat for government modernisation (SGMAP), opened a public sector forum for debating open source software in February 2016, in particular regarding the state's strategy in this area and how to use it.
- **January 2016:** the French draft digital law, '*Loi Numérique'*, was presented to the French Parliament, after being co-created with citizens through an online public consultation. This is the first law in France resulting from a co-design process. This draft law aims to structure the new French digital economy and includes new digital principles for it to succeed, for example open data.

3.10.3 *Country Specific Recommendations*

The 2017 CSR contains no direct mentions of subjects related to TO2 and TO11, nor are any significant opportunities for their application discernible within it. However, opportunities could lie in the application of eTax measures to simplify, optimise and reduce the cost of tax collection. These barriers represent an obstacle to the modernisation and digitisation of the French economy in recital 17.

3.10.4 *National Reform Programme*

The following links to TO2 and TO11 highlight the main priorities and planned measures in the eGovernment and interoperability domains identified in France's NRP[82].

Thematic Objective 2:

- **Deployment of student portal:** the deployment of 35 measures at the national level dedicated to improving student life were adopted, which among others led to the creation of a new portal online, on which students could access important information and conduct some of their administrative tasks.

[82] France 2017 NRP, available at: https://ec.europa.eu/info/sites/info/files/2017-european-semester-national-reform-programme-france-fr.pdf

- **Promotion of the re-use of Open data:** in the framework of the Re-use of Public Sector Information (PSI) Directive of 28 December 2015, the Digital Republic Act[83] facilitates the opening of public data to the rest of the public, especially for business and researchers. This aims to enhance the creation of new services and added value in the economy.
- **Introduction of online social protection:** the management of the social care provision is now completely online. The calculation of its estimated allocation is also online, which allows beneficiaries to know how much is owed to them, and its disbursement by the *caisse nationale* is also automatic. This simplified access aims to make beneficiaries enjoy their full rights, emphasised through the creation of a new 'social rights' portal in 2017, with extended online functionalities based on the 'once only' principle. These functionalities apply to housing and health.

Thematic Objective 11:

- **Creation of an agency for the detection of corruption:** the agency will aim to detect the activities of lobbies through the use of a digital repository, which will hold information of interest representatives, deal with the legal and material protection of whistle-blowers and the re-enforcement of sanctions in case of malfeasance.

3.10.5 *Operational Programmes*

For the period 2014-2020, France adopted 28 OPs, one each for its old 20 regions and another eight dedicated to their overseas departments. Whereas some OPs do not offer exhaustive links to the aspects of TO2 and TO11 covered in the study, such as for Languedoc Roussillon, some of the regional OP draw funds from the European funding priorities and include reforms with links to TO2.

The following section will highlight the main project areas linked to TO2.

Thematic Objective 2:

- **Development of a new and innovative digital public services across different sectors:** the OP for the Île-de-France region aims specifically to enhance digital citizenship by improving user access to digital public services and online resources. To this end, the region is developing new digital public services and products that are innovative and can be applied to a multitude of different sectors, such as in education and health for example. The Rhône-Alpes region also looks at enhancing digital public services in the following domains: eCulture, eLearning and eHealth.
- **Application of big data and cloud technologies to strengthen the quality of digital public services:** the Provence-Côte d'Azur OP also aims to enhance the provision of digital public services through the application of cloud and big-data technologies for businesses.

[83] http://www.republique-numerique.fr/pages/in-english

- **Creation of innovative public services through the use of geospatial and open data:** the OP of Pays de la Loire also plans to use the ERDF funding to create new intelligent public services, which use geo-location and include open data facilities.
- **Roll out an observatory to monitor the provision of digital public services:** the Aquitaine region is rolling out a 'digital public services quality observatory'[84], which monitors and evaluates the quality and performance of online public services in the region in order to ensure a correct and homogenous provision of digital public services.
- **Introduction of remote ICT solutions to monitor the health of inpatients and outpatients:** the Aquitaine region aims to improve the quality of the healthcare system by introducing remote digital solutions monitoring the health of both inpatients and outpatients. These improvements include an increased usage of telemedicine and a shared information system for the treatment of patient data, which will have to meet ethical standards concerning patient data.

Thematic Objective 11:

- **Improvement of public sector cybersecurity:** the OP for the Nord-Pas-de-Calais makes a short reference to delivering public administration reform through a cyber-security and data protection outlook. The regional council clearly identifies this as an important measure needed to promote trust in the field of privacy, effective justice and online democracy.
- **Introduction of a digital portal for businesses:** the Rhône-Alpes region plans to facilitate businesses' consumption of digital public services by creating a region-specific eGovernment portal, which would offer exhaustive information on key administrative processes. The Provence-Alpes-Côte d'Azur region is also aiming to increase the provision of digital public services for businesses through online services.

[84] http://www.aquitaine.fr/Media/fichiers/actions/innovation-developpement-economique/europe-2014-2020/po-feder-fse-281020142

3.11 Germany

3.11.1 *Socio-economic Outlook*

Economic Outlook

Germany is in the preventive arm of the Stability and Growth Pact and subject to the debt rule. In its 2017 Stability Programme, the government plans a budget surplus of between 0.25 and 0.5% of GDP over 2017-2021. According to the Stability Programme, the general government debt-to-GDP ratio is expected to gradually decline to 57% in 2021[85].

Public Investment

Public investment as a proportion of GDP has remained constant and is below the euro area average. A public investment backlog persists, in particular at municipal level, where net investment remains negative. This is despite measures being taken over the last few years and significant increases in public investment at general government level. Additional measures were taken in 2016, which should increase the scope for public investment, including at federal, state and local level.

Research and Innovation

The proportion of overall public and private education, as well as research expenditure, has been rather stable relative to GDP in recent years, but it remains below the EU average. At 9.1% in 2015, it fell short of the national target of 10% of GDP. Additional investment in education, research and innovation is crucial for Germany's future economic success. To achieve this, Germany has invested in vocational education and training.

Fiscal Framework

The German tax system remains complex, administration costs are high and several provisions hamper investment. Despite reductions, corporate capital costs remain. The top statutory tax rate on corporate income was 30.2% in 2016, above the EU average. Lowering the capital costs on equity could strengthen private investment. Other features of the tax system, which distort investment decisions, are the inclusion of non-profit elements in the tax base, limitations on loss carry-forwards, and distortions with respect to the choice of legal form.

Digital Economy

There are currently barriers hampering full digitisation. Germany is not performing well in the availability of high-speed broadband connections. Furthermore, computer usage by young Germans is low and many schools lack broadband access. Performance in digital public services is also below the EU average. SMEs also need to catch up in terms of digitisation, where only a fifth have a digitisation strategy. A network of SME centres has been set up to strengthen and accelerate the digitisation of SMEs and the 'Industrie 4.0' platform aims to bring together relevant stakeholders.

Administrative Barriers

High regulatory barriers remain in the business services sector and regulated professions. The level of restrictions is higher than the EU average; in particular, for architects, engineers and lawyers. In addition, the business churn rate for these professions is significantly lower than the EU average, which seems to indicate relatively low dynamism and competition in professional services.

Unemployment

Employment has continued to rise and unemployment has fallen to low levels. However, the increase in employment has been partly due to an increase in part-time work; in particular, among women. Disincentives to work for second earners and widespread part-time work hamper the full use of the

[85] Recommendation for a Council Recommendation on the 2017 National Reform Programme of Germany and delivering a Council opinion on the 2017 Stability Programme of Germany, COM(2017) 505 final, Brussels, 22.5.2017.

labour market potential. Better provision of quality and affordable childcare is crucial for increasing female participation in the workforce.

3.11.2 *Country eGovernment and Interoperability Outlook*

Germany is performing below its potential in terms of 'Digital Public Services', ranking only 20th in the EU. However, Germany still registered a marginally improved performance score, going from 0.45 to 0.46[86]. A sub-dimension Germany could greatly improve in remains the 'Number of citizens who use eGovernment services', which currently stands at 19% and ranks 23rd.

The following are some of the eGovernment and interoperability highlights that have occurred in Germany since 2016:

- **December 2016**: during the Paris Open Government Partnership Summit 2017, Germany and Luxembourg were among the European countries that announced their intentions to join the Open Government Partnership[87]. The Federal Cabinet also adopted the decision to launch a virtual platform for all eGovernment services. Every administrative platform, be it at local, state or federal level, will provide full access to all administrative services online.
- **November 2016:** the Federal Government adopted a new Cyber Security Strategy (*Cyber-Sicherheitsstrategie für Deutschland 2016*). During the 'Drupal in Public Administration' conference that took place in Dusseldorf on 17 November, German ICT service providers pooled their work and unveiled DeGov, a portal solution built on Drupal 8. The DeGov portal solutions is tailored to Germany public administration.
- **August 2016:** the German government study allowance system for students, BAföG, was fully launched online. Students can apply for loans and grants, check the status of their applications and download documents. The portal is available at www.BAfög.de.
- **February 2016:** Germany's Federal Ministry of Transport and Digital Infrastructure (BMVI) is bringing fast internet to underserved areas. Municipalities and rural districts (*Landkreise*) can apply for up to EUR 50,000 to plan expansion projects and complete applications for federal funding. Approved projects will be funded up to a maximum of EUR 15 million.

3.11.3 *Country Specific Recommendations*

The 2017 CSR makes no specific mention of subjects related to TO2 and TO11, nor is any significant opportunity for their application discernible within it. However, eTax measures can be proposed to simplify and optimise the tax system. Moreover, recital 13 does mention the need for Germany's SMEs and educational system to digitise, which can be related to themes within the realm of TO2.

[86] Germany 2017 eGovernment factsheet, available at: https://joinup.ec.europa.eu/sites/default/files/ckeditor_files/files/eGovernment_in_Germany%20_March_2017_v2_00.pdf
[87] https://www.opengovpartnership.org/countries/germany

3.11.4 *National Reform Programme*

The following links to TO2 highlight the main priorities and planned measures in the eGovernment and interoperability domains identified in Germany's NRP[88].

Thematic Objective 2:

- **Roll out of eTax:** the German NRP aims to make taxation easier, faster and more efficient through digitisation. The law on the modernisation of insurance procedure sets the framework for the necessary digitisation process. A uniformed and modernised taxation system would make the economy more efficient and would contribute to reducing administrative burdens.
- **Promotion of the re-use of Open Data:** the German Parliament is planning to propose changes to the current eGovernment act adopted in 2013 to strengthen innovation in the digital economy. In particular, the planned changes will aim to promote the use of open data to foster research, innovation and new economic activities.

3.11.5 *Operational Programmes*

A thorough evaluation of Germany's OPs for the 2014-2020 financing period has revealed that there are no initiatives planned under TO2 and TO11 that would fall under the scope of this study.

[88] Germany 2017 NRP, available at: https://ec.europa.eu/info/sites/info/files/2017-european-semester-national-reform-programme-germany-de.pdf

3.12 Greece

3.12.1 *Socio-economic Outlook*[89]

Economic Outlook

The Greek economy demonstrated greater resilience in 2016 as real GDP only stagnated in 2016; better than expected at the beginning of the programme. The Greek economy is expected to grow at a robust pace, albeit somewhat slower than projected at the time of the first review. GDP growth is still set to gather pace in 2017 and 2018, reaching 2.1% and 2.4% respectively, down from 2.7% and 3.1% projected earlier.

Labour Market

The labour market shows signs of improvement. After a long period of increase, the unemployment rate started to decrease again since the beginning of this year to stand at 22.5% in March 2017, marking a five-year low. Employment also recorded an increase in the first quarter of 2017 according to the EU-LFS statistics, following a downturn observed in late 2016.

Business Environment

Private consumption and investment are projected to be the main drivers of growth in 2017-2018. Based on its observed resilience, private consumption is expected to be the main driver of growth in 2017, supported by an increase in employment. The business climate is also expected to improve, leading to the return of investment, albeit moderate. In 2018, growth of investments will accelerate further and gross capital formation will become the main contributor to growth. Contribution of net exports is expected to turn positive in 2017 and 2018, due to increased demand in the tourism sector.

Investment

Investment, in particular foreign investment, and exports are expected to be the most vulnerable components. Other risks are linked to the external environment: the impact of the refugee crisis, the impact of geopolitical developments in the area as well as impending withdrawal of the United Kingdom from the European Union. Finally, protracted public expenditure restraint or further postponement of public investments could put a significant drag on growth.

3.12.2 *Country eGovernment and Interoperability Outlook*

According to DESI, 'Digital Public Services' is the dimension in which Greece attains its best score, albeit ranking only 20th among EU countries surveyed. Nevertheless, it constitutes an improved position compared to 2015. However, Greece performs worse than the EU average in two digital public services indicators, namely the 'Use of Pre-Filled Forms' and 'Online Service Completion' indicators[90].

Modern public services offered online in an efficient manner are a vehicle for efficiency gains for enterprises, citizens, and the public administration itself. Greece faces a key challenge in online public services. Its indicator scores place it among the lowest in the EU and show that the level of sophistication of its services needs to improve. Despite this, Greece manages to score above the EU in the percentage of Internet users that have exchanged filled forms with the public administration

[89] Note: the Commission did not issue CSR to Greece this year, the information for this paragraph was taken from the Compliance Report The Third Economic Adjustment Programme for Greece, available at: https://ec.europa.eu/info/sites/info/files/compliance_report-to_ewg_2017_06_21.pdf

[90] Digital Single Market Scorecard for Greece, available at: https://ec.europa.eu/digital-single-market/en/scoreboard/greece

online (37%). The following are some of the eGovernment and interoperability highlights that have occurred in Greece since 2016:

- **December 2016:** Greek citizens can now make an appointment free of charge online (http://rdv.ehealthnet.gr) for a medical appointment or treatment at their local Primary National Health Network Unit or Health Centre. Safe access to eServices (authentication) takes place through the use of the personal codes for TAXISnet (i.e. the web-based application of the Tax Office).
- **November 2016:** the Ministry of Digital Policy, Telecommunications and Media was founded in November 2016 (Presidential Decree 123/2016 - Government Gazette 208/A/4-11-2016). Its mission is to develop and implement Greece's national policy on issues related to communication and digital infrastructures, as well as to contribute to an effective regulatory framework at European and international levels.
- **May 2016:** a workshop was organised by Open Knowledge Greece, allowing a group of citizens to formulate more than 32 proposals. The participants in this workshop made proposals on three topics: integrity and accountability, access to information; and provision of authorisation to citizens. The government will now assess these proposals to integrate them as measures in the third Action Plan of Greece for the period 2016-2018.

3.12.3 *Country Specific Recommendations*

Greece is currently subject to a stability support programme and, therefore, has not issued CSRs in 2017. The analysis of the European Semester's appraisal and assessment of Greece's eGovernment and interoperability progress will be done through the prism of Greece's OPs.

3.12.4 *National Reform Programme*

At the time of the study Greece has not submitted its NRP officially to the European Commission.

3.12.5 *Operational Programmes*

For the period 2014-2020, Greece has adopted a total of 16 OPs relating to TO2 and TO11. 14 of those are regional, one focuses on 'enhancing competitiveness, entrepreneurship and innovation, whilst the remaining one, 'Reform of the Public Sector' is the OP that has the most initiatives and investment priorities related to eGovernment and interoperability. The following section will outline the key projects linked to TO2 and TO11.

Thematic Objective 2:

- **Improvement of the efficiency of healthcare services through digital solutions:** the implementation of electronic prescription and electronic patient file maintenance system in all hospitals, centres, health and medical practices is currently in process.
- **Introduction of a standardised eID**: in order to ease citizen authentication when using public services, the government will continue working to introduce a single eID across Greece.

Through the creation of appropriate identification and authentication infrastructure for natural and legal persons, single points of access will become operational.

- **Simplification of a citizen access to eServices**: while aiming to reduce the costs experienced by citizens when accessing public services, the Government plans to create single and multi-channel services for citizens, with a single integrated information management system that will store all citizens' transactions.

Thematic Objective 11:

- **Digitisation of the judiciary system**: a new mechanism to review administrative procedures in the judiciary with the aim to reduce delays in administrative justice. A second phase of the project 'Integrated Judicial Case Management System Policy and Criminal Procedure' has been rolled out for the 2014-2020 period, with key priorities being performance framework planning and enhancing accountability of courts, data collection and introducing judicial statistics. The development of eJustice applications has begun in the country's main courts. Digitisation of the judiciary should be extended to the whole country by 2017.
- **Enhancement of interoperability across public administrations:** in order to improve the internal organisation and functioning of public institutions, new electronic systems are being introduced that will allow for interoperability, maximum communication as well as the electronic exchange of targeted information between different Government bodies. These systems fall under the strategic guidelines 'State Modernisation and Management' and 'Coordination of horizontal ICT policies in Public Administration'.
- **Enhancement of public administration's efficiency through digital tools:** the OP lays down several initiatives, such as the installation and operation of a centralised enterprise resource planning (ERP) solution, a digital single services payroll system, an electronic traffic environment, management and archiving of documents through the adoption of digital signature and a consultation platform.
- **Integration of and consolidating public registries:** under the OP, the Greek government plans to integrate and consolidate four public registries; the national registry of the insured, employed and pensioners (social security numbers), the police registry (identity card numbers), the tax registry (tax identification numbers) and the population registry.

3.13 Hungary

3.13.1 *Socio-economic Outlook*

Economic Outlook

Hungary is currently in the preventive arm of the Stability and Growth Pact and subject to the debt rule. In its 2017 Convergence Programme, the government plans a deterioration of the deficit from 1.8% in 2016 to 2.4% in both 2017 and 2018 and a gradual improvement thereafter to 1.2% of GDP in 2021. The medium term budgetary objective — a structural deficit of 1.7% of GDP until 2016 and revised to 1.5% of GDP as of 2017 — should be met by 2020[91].

Competitiveness

Low investment and low productivity are holding back Hungary's competitiveness and potential growth. Factors adversely affecting the business environment are linked to weaknesses in the institutional framework. Frequent changes in both the regulatory and tax environment constitute a barrier, alongside insufficient evidence-based policy-making. These barriers limit market dynamics and hamper investment. The complexity and uncertainty of the tax system, associated with high compliance costs and administrative burdens, weigh on investor confidence.

Fiscal Framework

Hungary's total tax-to-GDP ratio remains well above those of its regional peers and challenges in the tax system remain. The government has reduced the tax wedge for low-income earners but it remains high. This is particularly the case for low-income earners without children, still among the highest in the EU. The tax system also remains complex. Sector-specific taxes, some of which remain highly distortive, still tend to complicate the tax system and weaken the institutional environment.

Administrative Capacity

Weaknesses in institutional performance also weigh on the business climate and reduce the economy's potential. In particular, despite recent improvements, progress on strengthening transparency and competition in public procurement is limited. The current eProcurement strategy has the potential to enhance transparency but Hungary is experiencing delays in its implementation. This is undermining the goal of strengthening transparency and increasing competition.

Labour Market

Unemployment has been decreasing, while employment has improved thanks to private sector job creation and a public work scheme. However, the scheme is still not sufficiently targeted and its effectiveness in reintegrating participants into the open labour market is limited. At the same time, some sectors face increasing labour shortages. The profiling system for the unemployed is not yet fully effective. The gender employment gap has increased recently and parenthood still weighs on women's employment. Labour market participation is also affected by weak health outcomes and poor access.

Welfare State

The adequacy and coverage of social assistance and unemployment benefits is limited. The duration of unemployment benefits is still the lowest in the EU. The 2015 social assistance reform streamlined the benefits system but it does not guarantee uniform and adequate living standard for those in need. The minimum income benefit remains frozen at a low level. Additional targeted measures are needed for disadvantaged groups, in particular children and members of ethnic minorities.

[91] Recommendation for a Council Recommendation on the 2017 National Reform Programme of Hungary and delivering a Council opinion on the 2017 Convergence Programme of Hungary, COM(2017) 516 final, Brussels, 22.5.2017.

3.13.2 *Country eGovernment and Interoperability Outlook*

In 2017, Hungary ranked 27th across EU Member States in 'Digital Public Services', the lowest performer across all DESI dimensions. Its overall score, however, did improve from 0.33 to 0.35. The slow progress was hampered by challenges related to the use of pre-filled forms due to data protection rules[92].

The following are some of the eGovernment and interoperability highlights that have occurred in Hungary since 2016:

- **October 2016:** a service that makes the immediate query of key data relating to motor vehicles on a Web Assistant Application possible was introduced. Through the use of this service, customers can get information on certain technical data of one or more vehicles based on the authentic vehicle registration maintained by KEKKH, as well enabling individual examination and data control of the concerned data.
- **July 2016:** An electronic lawsuit system (*ePerkapu*) was introduced in 1 July 2016, in line with the amended Act III of 1952 on the Code of Civil Procedure, which now prescribes compulsory electronic communication with the court of justice for all parties represented by a legal counsellor, all domestic business entities and all public authorities. The main result of this measure has been the fastening of the delivery of documents in civil proceedings.
- **February 2016:** Central Office for Administrative and Electronic Public Services (KEK KH) Mobilised Customer Service was launched, which further facilitates services for citizens, as it is able to reach any part of the country and eliminates temporal and spatial obstacles. The Mobilised Customer Service has taken part in several events in twelve locations, where nearly 2,000 pieces of administrative affairs have been launched.
- **January 2016:** a new eID card was introduced, which is suitable for visual and electronic identification, electronic signature and, in addition, it stores social security and tax identification numbers as well. In October 2016, the total number of eID card applications was approximately 1.16 million, testifying to its popularity. 5.2% of the applied documents contain eSign function and 43.8% contain fingerprint data. The new Central Authentication Agent (CAA) has been launched, which supports the use of different authentication services, including the already existing Client Gate and the new eID card. The eIDAS authentication will be also made available within the Central Authentication Agent.

3.13.3 *Country Specific Recommendations*

Recommendation 2 offers a clear instruction to the Hungarian government to implement an eProcurement system '[…] Strengthen transparency and competition in public procurement, by implementing a comprehensive and efficient eProcurement system, and strengthen the anticorruption

[92] Hungary 2017 eGovernment factsheet, available at: https://joinup.ec.europa.eu/sites/default/files/ckeditor_files/files/eGovernment_in_Hungary_March_2017_v3_00.pdf

framework.' This injunction can be seen in the identified need to have a stronger, more transparent and effective public procurement strategy, as mentioned in recital 11 with a view to reduce corruption.

3.13.4 *National Reform Programme*

The following links to TO2 and TO11 highlight the main priorities and planned measures in the eGovernment and interoperability domains identified in Hungary's NRP[93].

Thematic Objective 2:

- **Roll out of eProcurement:** electronic communication will become compulsory in each procurement procedure as from 31 December 2017. A workshop concerning changes of the electronic version of the European Single Procurement Document was organised in May. The PILOT project was introduced on 31 May 2017, where functions of the system were presented. Besides amending the public procurement act, comprehensive amendments of related government decrees were required.

Thematic Objective 11:

- **Enhancement of ICT Capacity:** within the framework of eAdministration, large state registers and systems are to be connected through the Central Government Service Bus (CGSB). While developing the National Telecommunications Backbone Network, government networks are consolidated and their capacities increased. The aim is to establish the infrastructural background so that unified services and a modern inter-institutional (G2G) data transfer system will be available nationally. A local government ASP will be developed and spread nationally, together with the establishment of data warehouses.
- **Improvement of eGovernment portal:** the portal Web-Lak aims to become the point in the process of electronic administration where customers access a customisable administrative portal. Some of the services available through Web-Lak are the following: documents (including ID cards, residence cards, passports, and birth certificates); services for sole proprietors; and vehicle administration. As a result of the measures, efficiency increases, administration time decreases and processes are simplified, thereby improving the quality of customer service.

3.13.5 *Operational Programmes*

For the funding period 2014 – 2018, Hungary has adopted two national OPs specifically dealing with the themes related to TO2 and TO11: 'Public Administration and Civil Service Development'[94] and Economic Development and Innovation'[95] under the ERDF.

The following section highlights the main priorities identified in the OPs linked to TO2 and TO11.

[93] Hungary 2017 NRP, available at: https://ec.europa.eu/info/sites/info/files/2017-european-semester-national-reform-programme-hungary-en.pdf
[94] 'Public Administration and Civil Service Development' OP, available at https://www.palyazat.gov.hu/download.php?objectId=54180
[95] 'Economic Development and Innovation' OP, available at: https://www.palyazat.gov.hu/download.php?objectId=53465

Thematic Objective 2:

- **Enhancement of digital services:** as digitisation proceeds, the government is focusing on enhancing the provision of digital public services and upgrading the legal framework to support modernisation. Such enhanced digital services include an improved Central Authentication Agent, among other building blocks. The central agent supports process optimisation methods, like eLearning, distance learning, eTesting and the creation of an on-line consultation platform.
- **Strengthening eProcurement:** currently, the use of eProcurement solutions is still in its initial phase in Hungary. Several pan-European surveys (EUROSTAT, EUB) show that the uptake of eProcurement is slow in Hungary. Nevertheless, Hungary is taking active steps to speed up the introduction of eProcurement measures, following past country specific recommendations. The single eProcurement system aims to ensure that bidders are able to participate without the travel and postage costs originating from procurement procedures, thus increasing competition.

Thematic Objective 11:

- **Roll out of Application Service Provider system:** a new ASP system will be introduced, aiming to provide the framework needed for the functioning of a special, complex IT background service system, which is based on core network and infrastructure elements. The local system will be built into the ASP and provide eGovernment solutions. This will be made possible through the experience gained from the creation of the ASP centre for the Central region of Hungary, which allowed for the efficient use of resources for local governments.
- **Implementation of a data exchange system:** a system will be implemented to create an interface between the document management software that enables public organisations to communicate and exchange electronic records between them. The system will lay the foundations for the wider usage and application of digital file exchange among public administrations in Hungary.

3.14 Ireland

3.14.1 *Socio-economic Outlook*

Economic Outlook

Ireland is in the preventive arm of the Stability and Growth Pact. In its 2017, the government expects the headline deficit to decline to 0.4% of GDP in 2017 and to continue to decrease thereafter, into become a surplus of 1.0% of GDP in 2021. The medium-term budgetary objective — a structural deficit of 0.5 % of GDP — is forecast to be met in 2018. According to the Stability Programme, the general government debt-to-GDP ratio will reduce to 72.9% in 2017 and continue declining to 65.2% in 2020. In terms of growth, Ireland's current growth levels will remain strong, expanding at 4% and 3.6% in 2017 and 2018 respectively[96].

Labour Market

Promoting sustainable and inclusive growth that benefits all groups in society remains a challenge. Unemployment stood at 6.4% in March 2017, however the low work intensity of many households creates concerns that some groups are not benefitting significantly from the economic recovery. From 2013 to 2015, the percentage of the population living in low or very low-work-intensity households fell by only 15%, whereas the unemployment rate dropped by 28% of the total unemployed.

Welfare State

The Irish system works well in preventing rise of poverty and inequality and additional measures have been taken to incentivise employment by limiting the withdrawal of benefits and supplementary payments. However, barriers to inclusive growth exist. Disparities in employment rates of low, medium and highly-skilled workers remain high, skills shortages have emerged and upskilling opportunities are insufficient.

Infrastructure

Infrastructure development should be addressed in order to promote sustainable growth. The economic crisis led to a shift in the composition of government expenditure away from investment and towards spending. Years of reduced investment have impacted the quality of infrastructure. Ireland only ranks 25th in the EU in public research and development investment.

3.14.2 *Country eGovernment and Interoperability Outlook*

Ireland has both improved its ranking and overall score from 2016 to 2017; from 10th to 7th place and from 0.58 to 0.67 respectively. In the sub-dimension 'Open Data', Ireland jumped from 18th to 3rd place; the establishment of the Open Data Portal in June 2015 contributed to this. In the other areas, there has not been a significant improvement.

The following are some of the eGovernment and interoperability highlights that have occurred in Ireland since 2016:

- **November 2016:** the Irish Government ran a two-week public consultation on the draft of the Second Open Government Partnership National Action Plan[97]. The draft version of the National Action Plan was comprised of 15 different initiatives in three different areas.

[96] Recommendation for a Council Recommendation on the 2017 National Reform Programme of Ireland and delivering a Council opinion on the 2017 Stability Programme of Ireland, COM(2017) 507 final, Brussels, 22.5.2017.
[97] Second Open Government Partnership National Action Plan, available at: https://www.opengovpartnership.org/sites/default/files/Ireland_NAP_2016-2018.pdf

- **September 2016:** the Irish Government launched MyGovID, a single secure online identity allowing access to a whole range of government services more easily, using only one password. To ensure citizen privacy, the platform uses the Department of Social Protection SAFE process to verify, identify and actively protect information. Also in September, the Environmental Protection Agency, in collaboration with numerous Irish agencies and the Local Authority Waters and Communities' Office launched http://www.catchments.ie, to provide data, graphics and mapping of water quality in 46 catchments across Ireland[98].

3.14.3 *Country Specific Recommendations*

The 2017 CSR for Ireland makes little or no mention of the need to implement measures related to TO2 or TO11, nor are any real opportunities for their application discernible in direct recommendations and recitals.

3.14.4 *National Reform Programme*

The following links to TO2 highlight the main priorities and planned measures in the eGovernment and interoperability domains identified in Ireland's NRP[99].

Thematic Objective 2:

- **Enhancement of the Health sector through digital tools**: progress continues to be made in relation to eHealth. There is significant ICT input and support in the Finance Reform Programme, through the Integrated Financial Management System. An electronic health record (EHR), through the Maternity and Newborn Clinical Management System Project, was introduced for all women and babies in maternity services in Ireland. This record will allow all information to be shared with care providers.
- **Introduction of eReferrals (National Electronic General GP Referrals):** this is an initiative that has developed the infrastructure to electronically transmit referrals from GPs to Acute Hospitals. It has now been rolled out to all six hospital groups and the ICT capital provision is being examined in the context of the mid-term capital review.

3.14.5 *Operational Programmes*

For the period 2014-2020, Ireland has adopted two OPs, 'Border, Midland and Western Regional Operational Programme 2014-2020' and 'Southern and Eastern Regional Operational Programme' that link to TO2. Both OPs share similar funding priorities, one of which is linked to TO2 – 'Access to, use and quality of high-speed information and communication technologies by settlements in the Regions, including SMEs':

[98] https://joinup.ec.europa.eu/sites/default/files/ckeditor_files/files/eGovernemnt_in_Ireland_March_2017_v2_00.pdf
[99] Ireland 2017 NRP, available at: https://ec.europa.eu/info/sites/info/files/2017-european-semester-national-reform-programme-ireland-en.pdf

Thematic Objective 2:

- **Investment in key enabling ICT infrastructure for eGovernment services**: the Irish government plans to invest in key ICT infrastructure, which will help to provide key enabling infrastructure for research and development, foster enterprise start-up and growth as well as to further eGovernment services development.

3.15 Italy

3.15.1 *Socio-economic Outlook*

Economic Outlook

Italy's CSR notes that it is still experiencing significant macro-economic imbalances and low growth, coupled with high-debt. According to the stability programme, the government debt-to-GDP ratio is projected to peak in 2015 at 132.7% and to gradually decline to 123.8% in 2019. The European Commission 2016 spring forecast expected the debt-to-GDP ratio to stabilise in 2016 and start a slight decline only as of 2017[100].

Fiscal Framework

Italy's taxation system hinders economic activity and several factors continue to hamper its overall efficiency. These are linked to very low levels of tax compliance and an overdue reform of tax expenditures, in particular with respect to the reduced value-added tax rates, and an old and complicated system of cadastral values. Although significant reforms have been enacted to address shortcomings in Italy's fiscal framework, many have not been implemented fully and a lot still need to be done to relieve the tax burden and make collection more effective.

Administrative Capacity

While recent measures have been taken to step up the fight against corruption, including by raising penalties and prescription terms for specific corruption offences, the long-recommended systematic revision of the statute of limitations, is still on hold. Accounting fraud remains an issue and it continues to hamper effective governance. Moreover, the justice system continues to impede a secure business environment, as it is constantly burdened by a collection of lengthy court proceedings and a high number of pending civil and commercial cases, which remain a challenge to judicial efficiency. In addition, Italy's insolvency system and debt collection frameworks are insufficiently conducive to a swift resolution of impaired loans.

Economic and Administrative Barriers

The administrative and regulatory burden still weighs on economic operators. Limited progress has been made towards fostering competition in services. A number of provisions, for instance on the legal profession, have been weakened during the parliamentary process. A number of areas are still over-protected or regulated, notably the health sector, local public transportation and taxis, ports and airports. The retail sector is also hampered by a number of inefficiencies caused by the strictness of market regulation.

Public Procurement

Strengths in terms of starting a company or insolvency resolution are offset by weaknesses in terms of dealing with construction permits, contract enforcement, tax payment or access to credit. The implementation of the national public procurement strategy, adopted in early 2016, could also help to tackle some systemic and widespread weaknesses.

[100] Recommendation for a Council Recommendation on the 2017 National Reform Programme of Italy and delivering a Council opinion on the 2017 Stability Programme of Italy, COM(2017) 511 final, Brussels, 22.5.2017.

3.15.2 *Country eGovernment and Interoperability Outlook*

Italy ranks 21th among EU countries in the provision of 'Digital Public Services', which is four ranks lower compared to previous year's report. While Italy has improved its 'Open Data' score to 52%, its rank has dropped to 19th place. It also scores relatively low in the 'eGovernment Users' dimension, placing it 25th in the EU.

The following are some of the eGovernment and interoperability highlights that have occurred in Italy since 2016:

- **December 2016**: the Agency for Digital Italy (AgID) is launching a new version of the National Open Data portal, http://www.dati.gov.it/, in order to present a collaborative platform on the topic of open data. Some of the main innovations of the new release are: exposure of about 18 000 datasets in open format; automatic transmission of metadata collected and displayed in the catalogue of the European data portal; availability on GitHub of the catalogue of additional implementation modules carried out by the portal's development team; the possibility for any Italian public administrations to add data into dati.gov.it with agreed periodic updates.
- **November 2016**: teachers in public education will be able to access their professional allowance through a special eCard, which relies on an individual eID.
- **October 2016**: a dedicated Digital Team was established under the leadership of the national Commissioner for digital transformation, Diego Piacentini. This team will be responsible for the digital transformation of public administration and will answer directly to the Government.

3.15.3 *Country Specific Recommendations*

Italy's CSRs directly recommend Italy to use eGovernment and interoperability solutions to improve tax collection, invoicing and payment processing, which remain an issue in Italy. The European Commission urged Italy to 'take measures to improve tax compliance, including through electronic invoicing and payments' in its CSR Nº1. This clearly shows a link to TO2.

Furthermore, an analysis of the European Commission's recommendations reveals areas of opportunity, where eGovernment and interoperability could offer further relief, if not permanent solutions to chronic issues within Italian governance. This is specifically true for recommendation Nº2, where the European Commission recommends Italy to 'Reduce the length of civil justice proceedings by enforcing reforms and through effective case-management'. This can be, for example, an opportunity area where the digitisation of judicial proceedings, case management, or the introduction of eJustice processes could help to address this recommendation. The potential interventions are closely linked to TO2.

3.15.4 *National Reform Programme*

The following links to TO2 and TO11 highlight the main priorities and planned measures in the eGovernment and interoperability domains identified in Italy's NRP[101].

Thematic Objective 2:

- **Introduction of eID tools**: the renewal of the Digital Administration Code will introduce a digital identity with fully inscribed rights for the citizen. Through their digital citizenship, individuals will be able to access government services online. This move will also establish a single individual 'home', where citizens will be able to access all the communications and documentation sent by the state.
- **Investment in new technology**: the government has reserved EUR 1.1 billion for investment in digital infrastructure, public administration digitisation, and digital education.

Thematic Objective 11:

- **Enhancement of public administration's efficiency through digital tools**: the government is introducing several simplification decrees. A first decree aiming to simplify administrative procedures has been adopted. The Italian state has also preliminarily approved simplification decrees on the code for digital public administration, transparency in public procurement, among others.
- **Improvement of digital literacy of public sector professionals**: in October 2015, Italy launched a 'National Plan for the digitisation of education', that aims to complete the modernisation of education, by linking digital skills to the workplace and school personnel training. Its objective is to address Italy's low educational score in science, technology, engineering, and mathematics (STEM) and ICT, by encouraging information literacy, computational thinking, open and big data literacy, robotics and creativity in digital production. This includes programmes encouraging digital entrepreneurship and life-long learning, supported by the training of key public sector professionals.
- **Digitisation of the judiciary to improve its efficiency**: the government is also investing heavily in the digitisation of the justice sector. The digitisation of processes will beneficially impact their efficiency.

This analysis clearly reveals that Italy is committed to undertaking significant and fundamental reform in the area of digital public services and that change is already being implemented.

3.15.5 *Operational Programmes*

For the funding period 2014-2016, Italy adopted one national OP specifically dealing with the themes related to TO11, *PON Governance e Capacità Istituzionale*, and another one that addresses them in a few instances *PON Legalità*. These programmes contain funding priorities and planned reforms that

[101] Italy 2016 NRP, available at: http://ec.europa.eu/europe2020/pdf/csr2016/nrp2016_italy_it.pdf

link to the themes addressed in this study. Italy focuses its OP around the concepts of digital literacy and interoperability of data. The following section will highlight the main project areas linking to TO11.

Thematic Objective 11:

- **Enhancement of civil servants' digital literacy on open data:** both OPs aim at strengthening transparency through an Open Government Framework, by enhancing public administration civil servants' IT skills and data competences. These measures aim to increase the generation and publication of data in public administration, but also facilitate their access for the wider public by disseminating the sharing of data and information.
- **Enhancement of public administration's digital infrastructure:** the OPs aim to foster digital growth by enhancing the digital infrastructure of public administration, to make staff management more efficient and re-engineering the delivery of services. This will be done also by improving the governance mechanisms between the central and regional governments, in order to ensure the full interoperability of systems and services.
- **Enhancement of interoperability in the judiciary domain:** the OPs specifically promote the digitisation of administrative processes and the provision of digital public services that are entirely interoperable, especially for the judiciary. Measures include creating a digital criminal file, with a view to improving the system of notifications of criminal cases, and adopting and new ICT technologies (i.e. video conference) for the use of citizens and businesses.

3.16 Latvia

3.16.1 *Socio-economic Outlook*

Latvia's CSR notes that it is displaying encouraging signs of economic growth and financial stability. Significantly, government debt levels remain low at 40% of GDP and is forecasted to decrease to 38% by 2018. Moreover, Latvia will maintain a manageable 1% public deficit for both 2016 and 2017. However, the 2016 CSR document highlights areas, where Latvia will have to intervene in the coming years.

Economic Outlook

The labour supply is constrained by a declining working age population and wage growth exceeds productivity[102], threatening cost-competitiveness. Measures to increase employability and improve human capital are therefore necessary to support competitiveness. The coverage of activation measures remains low, particularly for the long-term unemployed. When this is combined with poor health and insufficient social services, the effective reintegration of the long-term unemployed in the labour market is hampered. Focusing on increasing citizen engagement through the labour market activation measures already in place would boost employment

Labour Market

The low public financing of healthcare, inherent structural weaknesses, informal payments and sub-optimal cost-effectiveness leave much of the population with unmet healthcare needs. Financial constraints continue to limit the supply of services in general. The ongoing health sector reform based on the Health Strategy for 2014-2020 is aimed to address some of the shortcomings. The objective is to increase public financing for the health sector to 4% of GDP by 2020 from 3% of GDP in 2015. The implementation of the reform is estimated to increase employment by 0.6% and the GDP level by 2.2% by 2023, which will have a positive impact on the sustainability of public finances in the long run.

Healthcare

Latvia suffers from low protection for investors in the application of the insolvency system, coupled with inefficiencies in public administration, which further inhibit investments. The insolvency regime is perceived by business as an obstacle, given that assets recovery rates are low and insolvency administrators are subject to little supervision. Innovation issues, shortcomings in the business environment and the shrinking size of the labour force, are also holding investments back. Poor innovation drive and a fragmented research base hamper Latvia's rapid and efficient transition towards higher value-added and more knowledge-intensive activities.

Economic and Administrative Barriers

Latvia has introduced several successful initiatives to improve the efficiency and quality of the justice system. However, although comprehensive, the conflict of interest prevention regime for public officials is complex and rigid, prioritising formal compliance over the merits of individual cases. Moreover, the Corruption Prevention Office has been weakened by internal tensions, destabilising it and reducing public trust in its operations and willingness to prioritise high profile cases. General inefficiencies in public administration are due, largely, to high staff turnover, delays in the public service reform and

Administrative Capacity

[102] Recommendation for a Council Recommendation on the 2017 National Reform Programme of Latvia and delivering a Council opinion on the 2017 Stability Programme of Latvia, COM(2017) 513 final, Brussels, 22.5.2017.

weak project management. Moreover, public sector remuneration is not properly linked to responsibilities.

3.16.2 *Country eGovernment and Interoperability Outlook*

Latvia ranks 15th in the 'Digital Public Services' dimension, with a score of 0.51, an improvement from the previous year. Latvia performs the strongest in the dimension of Online Service Completion; it is at 8th place with a score of 91. However, Latvia is the last amongst the Member States in the 'Open Data' sub-dimension, with a score of only 15%.

The following are some of the eGovernment and interoperability highlights that have occurred in Latvia since 2016:

- **December 2016:** the Minister of Environmental Protection and Regional Development signed the Memorandum of Cooperation on 'common goals and cooperation in the process of digital transformation of Latvia and development of a Data Driven Nation' with the Latvian Information and Communications Technology Association[103].
- **August 2016:** Cabinet of Ministers approved the 'National budgeting funding for free internet and computer use for local government public libraries, current relevance and the way forward' statement, which determined specific funding of more than EUR 430 000 every year to support internet availability and computer development in public libraries for the 2017 – 2019 period.
- **February 2016:** the Ministry of Environmental Protection and Regional Development launched a proposal for the project entitled 'Public administration information and communication technology Architecture Management System' (PIKTAPS)'[104]. This proposal is estimated to cost EUR 4.5 million and would be paid for by EU Funds. The aim of the PIKTAPS project is to ensure the mutual consistency of projects, essential central platform design and implementation, as well as to contribute to enhancing society's interest and capability in ICT, generated by the effective use of ICT solutions.

3.16.3 *Country Specific Recommendations*

The CSR issued for Latvia contains recommendations for measures that link to TO2. In particular, recital 12 states that 'further efficiency gains could be achieved through regular use of eProcurement and central purchasing, making public expenditure more transparent and efficient'.

Furthermore, Recommendation Nº3 calls for Latvian government to 'Increase efficiency and accountability in the public sector, notably by simplifying administrative procedures and strengthening the conflict of interest prevention regime, including for insolvency administrators.' This suggests an opportunity for measures linked to TO11, by applying eGovernment measures to strengthen administrative capacity.

[103] https://www.likta.lv/LV/Aktivitates/Lists/Aktivitates/Attachments/148/Memorandum%20VARAM%20LIKTA%20-%20ENG.pdf
[104] http://www.varam.gov.lv/lat/darbibas_veidi/e_parv/piktaps_projekts/

3.16.4 *National Reform Programme*

The following links to TO2 and TO11 highlight the main priorities and planned measures in the eGovernment and interoperability domains identified in Latvia's NRP[105].

Thematic Objective 2:

- **Expansion of participation in the eHealth System:** the Latvian eHealth system is available to residents, medical institutions and pharmacists since 12 September 2016[106]. The pilot phase of the eHealth systems finished on 31 August 2017. Work is ongoing to encourage the aforementioned stakeholder groups to join the system. A further development of the eHealth system is planned to use the funds from the programming period 2014-2020.
- **Improvement of the Electronic Customs Data Processing System (ECDPS):** in efforts to improve its administrative capacity, taxpayers can now make online payments for domestic VAT, SSIMC, PIT, CIT and any other domestic excise duty objects.
- **Introduction of eServices in the judiciary:** the judicial eService portal, manas.tiesas.lv, was created to enhance contract enforcement, which would help to improve the conduct of assigned court hearings. The portal allows the citizen to submit documents in court and follow the proceedings of his or her cases using online authentication. It is also planned to introduce the functionality of online payments to the platform.
- **Development of the one-stop-shop principle:** aiming to modernise the public administrations, the Latvian government plans to streamline public administration processes by ensuring single point of access to digital public services for citizens and entrepreneurs. Work is ongoing on the establishment of a single customer service centre.
- **Introduction of machine-translation tools:** under the Latvian language integration project, work is ongoing to introduce machine-translation tools in the public sector, to develop translation memory and storage technologies. Automated translation of Latvia's public administrations and local government eServices descriptions, home pages and other internet resources, into another language, helps to expand the range of service recipients and contributes to the elimination of linguistic barriers in the single digital market.
- **Digitisation of Cultural Heritage:** in 2017, the Latvian National Library launched a project aiming to digitise approximately 3 million pages of textual documents, 100,000 pictures and approximately 460,000 minutes of audio-visual material. The goal of the Digitisation of Cultural Heritage Content is to create a single digital resource register in Latvia.
- **Improvement of the digital interaction between public administration and private sector:** between 2017 and 2019, a study on the Integrated Public Service Provision and Monitoring of End User Needs will be carried out. The goal of the study is to establish a single, integrated Latvian eAdministration efficiency tool, which would monitor the changes in public data reuse and ensure the efficient interaction between public and private sectors.

[105] https://ec.europa.eu/info/sites/info/files/2017-european-semester-national-reform-programme-latvia-en.pdf
[106] www.eveseliba.gov.lv

Thematic Objective 11:

- **Introduction of a Single Human Resource Management Information System:** aiming to enhance the human resource management in the public sector, the Latvian government is planning to introduce a Single Human Resource Management Information System, which would serve as a convenient ICT tool for personnel management, measurement of public administration operation results and for modelling remuneration.
- **Implementation of the NIS Directive[107]:** the Latvian government commits to the transposition of the Network and Information Security Directive into the national legislation in 2017.

3.16.5 *Operational Programmes*

For the funding period 2014-2016 Latvia has adopted one OP, 'Growth and Employment'. The OP offers key measures that encourage the promotion of an information society in Latvia and deliver improved digital public services. The programme contains funding priorities and planned reforms that link both to TO2 and TO11.

This section highlights the main project areas linked to TO2 and TO11.

Thematic Objective 2:

- **Investment in ICT infrastructure for providing eGovernment services**: the OP identifies an investment priority of extending broadband deployment and roll out of high-speed networks in order to promote eGovernment services as well as to improve the competitiveness of the economy.
- **Delivery of electronic public services**: the government is rolling out a 'Public Service System Improvement Project', which aims to ensure the electronic availability of around 600 services in order to reduce the administrative burden on society and to create a uniform high-quality of living standards throughout the territory of Latvia.
- **Centralisation and standardisation of the open government data infrastructure**: the OP supports the provision of open, secure, interoperable and optimally organised data in order to facilitate public and private sector cooperation. To this end, it is important to centralise and standardise the public data infrastructure in Latvia, which was developed over different time periods and without common IT standards.
- **Promotion of the use of electronic public services:** in order to enhance the usage of digital public services and to ensure a maximum return on investments, Latvia plans to run an information campaign about their availability. It hopes that such education activities will help to foster understanding and adoption of digital services.

Thematic Objective 11:

- **Establishment of digital one-stop shops:** as part of the funding priority on developing ICT products, ICT services and eCommerce, the government plans to enhance digital public

[107] Directive (EU) 2016/1148 of the European Parliament and of the Council of 6 July 2016 concerning measures for a high common level of security of network and information systems across the Union.

service delivery through the establishment of digital one-stop shops in order to increase the efficiency of public administration and business competitiveness.

3.17 Lithuania

3.17.1 *Socio-economic Outlook*

Economic Outlook

The government plans to improve the headline balance from a deficit of 0.8% of GDP in 2016 to 0.9% of GDP in 2019, Lithuania is currently under the preventive arm of the Stability and Growth Pact. On the other hand, the structural balance of Lithuania, a deficit of 1% of GDP in structural terms, is set to stay above the medium-term budgetary objective in 2016 and thereafter. Overall, based on its assessment of the Stability Programme, Lithuania is expected to comply with the provision of the Stability and Growth Pact.

Demographics

With an expected cumulative loss of 35% of the working age population by 2030 and a low spending on social insurance pensions, Lithuania is in need of a comprehensive pension reform. The level of poverty among the elderly people in Lithuania is among the highest in the EU. The Lithuanian Parliament still needs to adopt a draft law proposed by the Government to introduce an indexation mechanism for public pensions.

Healthcare

With one of the poorest health outcomes and a particular high mortality rate of the population aged between the ages of 20 and 64 years, the highest in the Union, Lithuania is in need of healthcare reform. Key weaknesses of the healthcare system largely relate to the in-patient care and the low expenditure on prevention, as well as public health.

Human Capital

A big obstacle to Lithuania's transition towards a higher value-added economy is insufficient investment in its human capital. Lithuania suffers from high proportion of pupils with insufficient basic skills and low levels of participation in adult learning. Emerging skill shortages in certain sectors are expected to become more acute in the future. Hence, it is important to improve the labour market relevance of education, streamline the structure and funding of the educational system, develop life-long learning and improve the targeting and effectiveness of active labour market policies.

Fiscal Framework

In 2016, Lithuania still needed to reduce the tax burden on low-income earners by trying to shift it to other sources less detrimental to growth and social cohesion. Lithuania also needs to work towards improving tax compliance, particularly in the area of VAT.

3.17.2 *Country eGovernment and Interoperability Outlook*

Lithuania continues to score slightly above the EU average in the DESI 'Digital Public Services' dimension, with an absolute score of 0.62 making it 11th amongst the EU Member States. It ranks 7th in 'Online Service Completion' with a score of 92 and 8th in the 'eGovernment Uses' sub-dimension with 43% of the internet users accessing Lithuanian eGovernment sites. Significant improvement is still needed in the 'Open Data' sub-dimension because, in spite of improving its score to 40%, Lithuania ranks 26th amongst the Member States.

The following are some of the eGovernment and interoperability highlights having occurred in Lithuania since 2016[108]:

- **March 2017:** Lithuanian government approved the new Implementation Plan of the Government Administration[109]. The implementation plan lays steps to consolidate all state information resources, modernise and increase the effectiveness of the usage of state information systems and registers. eGovernment and digital economy are planned to be promoted on the governmental level by creating an office of the Chief Information Officer.
- **November 2016:** the new amendment to the Law on Public Administration[110] was approved, making it mandatory for all public and administrative service providers to update their information in the online catalogue of services, PASIS[111]. The catalogue contains both digital and non-digital public and administrative services available to the citizens and businesses and national and municipal levels along with the indicators to measure the services quality.
- **July 2016:** the Lithuanian government created and registered, according to requirements for national information systems, the national identification system, NETAIS (*Nacionalinė elektroninės tapatybės informacinė Sistema* – National eID information system)[112]. This system is based on STORK 2[113] solution and it will be upgraded according to the requirements of the eIDAS and its implementing acts (especially the EU Commission implementing Regulation (EU) 2015/1502[114]).

3.17.3 *Country Specific Recommendations*

The CSR for Lithuania in 2017 stresses the importance of reducing corruption, among other things. It is notable that, in response to previous years' CSR, the Lithuanian government has obliged contracting authorities to publish online information on initiated tenders, the successful bidders and the contracts awarded.

While Lithuania's 2017 CSR makes no specific recommendations linked to eGovernment and interoperability, Recommendation Nº1 call on Lithuanian government to take actions to improve tax compliance and broaden the national tax base. Given the need to reduce the shadow economy in Lithuania, there is an opportunity for the government to further implement eTax measures, hence a potential link to TO2.

[108] https://joinup.ec.europa.eu/sites/default/files/inline-files/eGovernment_in_Lithuania_March_2017_v4_00.pdf
[109] https://www.e-tar.lt/portal/lt/legalAct/2389544007bf11e79ba1ee3112ade9bc
[110] https://www.e-tar.lt/portal/lt/legalAct/c799ca10ac9811e6b844f0f29024f5ac
[111] http://www.lietuva.gov.lt/
[112] https://www.epaslaugos.lt/portal/login?target=citizen
[113] https://joinup.ec.europa.eu/document/stork-20-secure-identity-across-borders-linked-20-stork-20
[114] 9.9.2015 L235/7 Commission Implementing Regulation (EU) 2015/1502 of 8 September 2015 on setting out minimum technical specifications and procedures for assurance levels for electronic identification means pursuant to Article 8(3) of Regulation (EU) No 910/2014 of the European Parliament and of the Council on electronic identification and trust services for electronic transactions in the internal market (Text with EEA relevance).

3.17.4 *National Reform Programme*

The following link to TO2 highlights the main measure in the eGovernment and interoperability domains identified in Lithuania's NRP[115].

Thematic Objective 2:

- **Automation of the tax information exchange:** in 2016, the development of the legal instrument for automatic exchange of tax information was completed in line with the global standard approved by the Organisation for Economic Co-operation and Development (OECD).

3.17.5 *Operational Programmes*

For the funding period 2014-2020, Lithuania adopted one OP, 'Competitiveness and Cohesion', specifically dealing with the themes related to TO2. 'Operational Programme for EU Structural Funds Investments for 2014-2020'[116] specifically aims to ensure the accessibility of high speed broadband connection for all, developing eServices, eSolutions, and eCommerce.

The rest of the section describes key projects in both OPs linked to TO2 and TO11.

Thematic Objective 2:

- **Completion of the digital taxation system**: Lithuania will use the funds to finalise the development of a digitalised Smart Tax Administration System (iMAS)[117].
- **Enhancement of access to open governmental data:** ERDF investments will be used to improve the re-use of public sector information by businesses and society. Only a small proportion of businesses used government data to create new electronic services, which could contribute to eCommerce. The Government will create tools, which will ensure transparent and easy to re-use access to public data.
- **Improvement of digital service delivery:** the Government plans to expand and improve digital public services by carrying out a comprehensive reorganisation of service provision and their orientation towards the user. Digital services for citizens will be enhanced in areas of public procurement, healthcare system and cultural content.

Thematic Objective 11:

- **Enhancement of interoperability across public administrations:** an important aspect of improving eGovernment is an optimal use of infrastructure and programme resources in the public sector. Lithuania currently suffers from a lack of interoperability. In order to optimise the public sector ICT base, measures safeguarding the interoperability, security and efficient management of information resources and infrastructure and technological solutions for the

[115] Lithuania NRP, available at: https://ec.europa.eu/info/sites/info/files/2017-european-semester-national-reform-programme-lithuania-en.pdf
[116] http://www.esinvesticijos.lt/lt/dokumentai/2014-2020-metu-europos-sajungos-fondu-investiciju-veiksmu-programa
[117] https://www.vmi.lt/cms/i.mas

protection of critical public ICT infrastructure will be implemented. In order to plan the optimal actions, the assessment of trends and prospects of the public IT infrastructure will be carried out.

3.18 Luxembourg

3.18.1 *Socio-economic Outlook*

Economic Outlook

Luxembourg is currently in the preventive arm of the Stability and Growth Pact; therefore, the government plans a decrease in the headline surplus from 1.6% of GDP in 2016 to 0.2% of GDP in 2017, followed by a steady increase thereafter, reaching a surplus of 1.2% of GDP in 2021. Overall, the Council is of the opinion that Luxembourg is projected to comply with the provisions of the Stability and Growth Pact in 2017 and 2018.

Pension System

Nevertheless, long-term fiscal sustainability concerns remain given the projected increase in ageing costs. Although the pension system is still recording a recurrent surplus, which allowed sizeable pension reserves to be accumulated, it is expected to record a negative balance in 2023. According to the recently revised Eurostat population projections, the projected increase in population will be less significant than previously expected. This will have an impact on the dependency ratio, which will increase faster than previously expected and lead to a higher projected increase in public expenditure for pensions. Therefore, in its 2017 CSR, the Council recommends Luxembourg to ensure the long-term sustainability of its pension system, limit early retirement and increase the employment rate of older people.

Fiscal Framework

The Luxembourg authorities have adopted a comprehensive tax reform that entered into force in January 2017. The reform introduced changes, mostly in the area of direct taxation, both for individuals and corporations, aimed at gradually reducing the corporate income tax rate (with the goal of increasing competitiveness) and increasing the progressivity of personal income tax (with the goal of increasing fairness).

Economic and Administrative Barriers

The central long-term challenge of Luxembourg is to reduce the economy's reliance on the financial sector. To tackle this challenge, the Luxembourg authorities should undergo specific measures to diversify the local economy. Given the country's high labour costs, the successful diversification of the economy depends, to a large extent, on sectors that are less sensitive to labour cost levels. These are largely based on research and innovation, which tend to be technology- and knowledge-intensive. Reducing or removing barriers to investment and innovation that limit economic development would unleash the potential for innovation and help diversification. Therefore, in its 2017 CSR, the Council recommends Luxembourg to further diversify its economy, including by removing barriers to investment and innovation and removing regulatory restrictions in the business services sector.

3.18.2 *Country eGovernment and Interoperability Outlook*

Luxembourg ranks 5th among EU countries in the provision of digital public services, which is similar to the previous DESI report[118]. In the meantime, its overall performance increased from 0.57 to 0.61. Luxembourg is one of the leading countries for 'Connectivity', 'Digital Skills' and 'Internet Usage' while

[118] Luxembourg DESI report, available at: https://ec.europa.eu/digital-single-market/en/news/digital-economy-and-society-index-desi-2017.

the ‘Integration of Digital Technologies by Companies’ and ‘Digital Public Services’ are its relative weakness.

The following are some of the eGovernment and interoperability highlights having occurred in Luxembourg since 2016[119]:

- **December 2016:** an official electronic journal collating all of the legal norms of the Luxembourg Government was created. Thanks to the journal, legal norms do not need to be published in paper form anymore as their publication in electronic form on the portal (http://legilux.public.lu/) is sufficient to confirm legal validity. A completely new version of the portal has been established to achieve this aim. The new version is called *Journal officiel électronique du Grand-Duché de Luxembourg*.
- **December 2016:** creation of a PEPPOL (peppol.eu) access point at the end of 2016. This allows the submission and process of eInvoices through a central access, compliant with the semantic standard and the syntaxes defined by the CEN (European Standardisation Body). The access point can be used both by governmental and local organisations.
- **December 2016:** decision to implement a public cloud infrastructure called govCloud, aiming to offer secure, high quality, standardised and mutualised cloud infrastructure and services for public organisations in Luxembourg[120].
- **June 2016**: Luxembourg became the first EU Member State to adopt the Corporate Information Management Framework (CIMF). The CIMF is based on a structured and holistic set of principles that encompass the different phases of the information lifecycle. These principles stress the importance of information as a critical public asset and focus on how information should be generated, managed, shared, protected and preserved. The approach emphasises the need to establish, implement and manage this framework at the corporate level.
- **April 2016**: the new Open Data Portal, which provides access to more than 200 national datasets (Data.public.lu), went online. The portal is the gateway to the Luxemburg public services which combines freely accessible data in different areas: geo-spatial data in various fields, environmental data, public health data, traffic and statistical data.

3.18.3 *Country Specific Recommendations*

The CSR issued by the European Commission for Luxembourg makes no specific mention of the need to intervene in the eGovernment and interoperability fields.

3.18.4 *National Reform Programme*

The following links to TO2 highlight the main priorities and planned measures in the eGovernment and interoperability domains identified in Luxembourg’s NRP[121].

[119] Luxembourg eGovernment factsheet 2017, available at: https://joinup.ec.europa.eu/community/nifo/og_page/egovernment-factsheets
[120] http://www.gouvernement.lu/6600433/22-strategiecloud?context=519177
[121] Luxembourg 2017 NRP, available at: https://ec.europa.eu/info/sites/info/files/2017-european-semester-national-reform-programme-luxembourg-en.pdf

Thematic Objective 2:

- **Development of High Performance Computing (HPC) and Big Data enabled applications**: the objective of this partnership project with France, Italy and Spain is to develop an HPC infrastructure and a world class portfolio of Big Data applications. Four major areas were in focus for 2016: involving private partners in Luxembourg that are stimulated by the implementation of industrial user consortia; launching of several studies, the purpose of which is to establish a skills centre and Big Data; establish technical working groups and begin designing innovative technical solutions; continue the labelling of the Project of Common European Interest[122]). This project should provide significant leverage for research activities and on the digitisation of the Luxembourg economy.
- **Support of start-ups through the ICT Digital Tech Fund:** the fund is dedicated to innovative public and private companies. The Fit4start[123] programme continues with two editions in 2016 by coaching and supporting start-ups in the ICT sector. Furthermore, Technoport[124], the national incubator, helps and supports individuals and small teams to validate and bridge their ideas. In addition, the Luxembourg House of Finance Technology provides the space necessary for the development of the national Fintech ecosystem[125].

3.18.5 *Operational Programmes*

A thorough evaluation of the Luxembourg's OPs for the 2014-2020 financing period has revealed that there are no initiatives under TO2 and TO11 that would fall under the scope of this study.

[122] For more details see: https://ec.europa.eu/commission/commissioners/2014-2019/oettinger/blog/luxembourg-launches-supercomputing-project_en
[123] For more details see: https://www.luxinnovation.lu/innovate-in-luxembourg/performance-programmes/fit-4-start/
[124] For more details see: http://www.technoport.lu/online/www/function/homepage/ENG/index.html
[125] http://www.lhoft.com/

3.19 Malta

3.19.1 *Socio-economic Outlook*

Malta's CSR notes that it is currently in the preventative arm of the Stability and Growth Pact and is subject to the debt rule. The Government plans to improve the headline balance to a surplus of 0.1% of GDP by 2019. In order to achieve its medium-term budgetary objective, the structural balance of Malta will gradually improve. The general government debt-to-GDP ratio is expected to fall to 62.6% in 2016 and decrease further to 55.5% in 2019. However, the measures needed to support the planned deficit targets from 2017 onwards have not been sufficiently specified. Overall, the Council is of the opinion that there is a risk that Malta will not comply with the provisions of the Stability and Growth pact and that further measures will need to be implemented to ensure compliance in future years.

Economic Outlook

Malta faces a challenge in the long-term sustainability of its public finances, largely due to the strains on the budget arising from ageing-related costs, such as healthcare, long-term care and pensions. In order to improve the adequacy of the pension system, the contributory national minimum pension continues to evolve in 2016, with the goal to reach 60% of the national median income by 2027. In addition, the Government has adopted a national health systems' strategy and is conducting a healthcare spending review in order to make expenditure more efficient. Nevertheless, sustainability of Malta's finance would benefit from using potential savings to address the projected expenditure growth.

Public Finances

Numerous factors are hampering foreign direct investment activities in Malta. These include insufficient capacity to innovate, skills bottlenecks and inefficiencies in both the public administration and justice system. Moreover, transport and logistical infrastructure is one of the major barriers to foreign investment flows. External costs borne by Malta's economy stem mainly from an inefficient use of the country's transport network and the lack of real alternatives to using private passenger cars. No comprehensive transport strategy has yet been implemented, despite the fact that the presence of such strategy is a precondition to access of European Structural and Investment Funds (2014-2020).

Foreign Direct Investment

3.19.2 *Country eGovernment and Interoperability Outlook*

As far as the provision of Digital Public Services is concerned, Malta maintained a stable position (12th) in the DESI report from 2016 to 2017, increasing its absolute score from 0.57 to 0.61. Malta also ranks first when considering 'Pre-filled Forms' and 'Online Service Completion'. However, the country shows some weaknesses concerning 'Open Data' (27th) and 'eGovernment Users' (20th).

The following are some of the eGovernment and interoperability highlights having occurred in Malta since 2016:

- **November 2016:** the Office of the Prime Minister, supported by the Malta Information Technology Agency, launched a Mobile Government Strategy for 2017-2018[126]. This strategy puts forward the Government's plans for the provision of public services over mobile devices

[126] https://publicservice.gov.mt/en/Documents/Mobile_Government_Strategy_2017-2018.pdf

(mServices) for the next two years and is another building block in the implementation of the Public Service Renewal Programme and the achievement of the ultimate vision of providing access to 24x7 public services from anywhere. The launch of the Mobile Government Strategy for 2017-2018 was accompanied by the soft launch of a number of public services through mobile devices, referred to as mService.

- **September 2016:** the first National Cyber Security Strategy (NCSS) was launched[127]. The strategy serves as a framework to protect information systems, networks and information on the internet, together with the respective users of the services that they provide; namely government, the private sector and civil society. The strategy is one of the action items proposed by Digital Malta - National Digital Strategy for the years 2014-2020. The key principles of the National Cyber Security Strategy aim to reflect the various facets of cyber security and the essential underlying complex nature of cyber space.
- **June 2016:** the National Blood Transfusion Service (NBTS), in collaboration with MITA Information Technology Agency (MITA), launched a mobile application aimed to facilitate instant communication between it and the Maltese Blood Donors community[128]. The Blood Donors MT mobile app provides a number of features such as regular news updates, schedule of upcoming events and a personal journal so that users can maintain a record of their donations.

3.19.3 *Country Specific Recommendations*

The CSR issued by the European Commission for Malta makes no specific mention of the need to intervene in the eGovernment and interoperability fields.

3.19.4 *National Reform Programme*

The following links to TO2 and TO11 highlight the main priorities and planned measures in the eGovernment and interoperability domains identified in Malta's NRP[129].

Thematic Objective 2:

- **Upgrade of eGovernment Services:** the use of eGovernment services will be simplified and promoted in a set of life events. Moreover, the Maltese government aims to improve the accuracy and the timeliness of the data collection, as well as reducing the visits to the Social Security Department and area offices by citizens. At the same time, real time services offered by the court are expected to increase the rate of case clearance, while decreasing disposition time[130]. Finally, with the launch of new mobile apps that guarantee access to certain government services 24 hours per day, the government is expecting a reduction in the bureaucratic burden and an improvement in the quality of the services provided.

[127] https://mita.gov.mt/en/maltacybersecuritystrategy/Pages/Malta-Cyber-Security-Strategy-2016.aspx
[128] https://www.mita.gov.mt/en/News/Pages/2016/Launching-of-the-Blood-Donors-MT-Mobile-App.aspx
[129] Malta 2017 NRP, available at: https://ec.europa.eu/info/sites/info/files/2017-european-semester-national-reform-programme-malta-en.pdf
[130] Disposition time is the number of unresolved cases at the end of a given period.

Thematic Objective 11:

- **Update of the Electronic System:** in order to facilitate the monitoring and data collection process at the work place, an updated electronic system is to be adopted (testing phase already entered). This system would transfer information to the Department`s database in real time and is expected to make the process more efficient and to cut administrative burdens for employers.
- **Launch of the National Cyber Security Strategy:** as already mentioned, in 2016 Malta launched the first National Cyber Security Strategy. This framework aims at fighting cybercrime and further improving the national cyber defence, along with raising awareness and creating a culture that could foster both national and international cooperation.

3.19.5 *Operational Programmes*

For the funding period 2014-2020, Malta has approved two national OPs specifically dealing with the themes related to TO11 and TO2, 'Fostering a competitive and sustainable economy to meet our challenges' and 'Investing in human capital to create more opportunities and promote the wellbeing of society'. The programme contains funding priorities and planned reforms that link to the themes analysed in this study.

The following section will highlight the main project areas linked to TO2 and TO11. This OP addresses two key dimensions that are intrinsically linked to the enhancement of digital public services.

Thematic Objective 2:

- **Widened delivery of digital public services across different sectors:** the Maltese government in particular sees the need to enhance the provision and support of digital solutions applied in sectors such as transport and taxation in this OP, with the aim to contribute towards the increased well-being and better living conditions for its citizens.
- **Facilitated provision eHealth services:** the OP also addresses eHealth and is highlighted in the Digital Malta Strategy, whereby eHealth services would provide citizens with secure and easy access to their health records and equip health care providers with secure and seamless access to patients' records.
- **Continuation of the development of eProcurement:** eProcurement is already in place and will continue to be developed further over the 2014-2020 programming period. Malta meets the provisions of the revised Directives in terms of eProcurement, considering that all public tenders with an estimated value exceeding the EU thresholds can and are being published as electronic tenders.
- **Improvement of the judiciary performance through enhanced ICT infrastructure:** in order to accelerate judicial administrative processes, the Maltese government in the OP 'Investing in human capital to create more opportunities and promote the wellbeing of

society'[131], aims to upgrade existing infrastructure and invest in ICT technology, to complement training for court personnel and other personnel employed in relevant key stakeholder organisations.

- **Improvement of the ICT infrastructure to ensure quality service delivery:** the OP addresses the development of targeted ICT infrastructure and IT networks needed to increase the use of eServices and to further develop the provision of eGovernment solutions, in line with the aims of the Digital Agenda, together with measures to enhance the demand and use of ICT amongst citizens.
- **Application of new technologies for better public services:** in line with the goals of the national digital agenda, the Maltese government aims to further develop the ICT sector through investments in ICT facilities, data management and open data systems, cloud computing, enabling networks and IT platforms, with the aim of reducing communication barriers.

Thematic Objective 11:

- **Development of a single window for customs clearance:** as part of the eCustoms Multi-Annual Strategic Plan (MASP), the government will support measures such as the creation provision of a 'single window' system in order to simplify information flows between businesses and public authorities in cross-border interactions. This will serve as a single contact point for relevant import and export regulatory requirements, thus reducing red tape and leading to faster transactions in line with the Services Directive.

[131] Investing in human capital to create more opportunities and promote the wellbeing of society OP, available at: http://eufunds.gov.mt/en/Operational%20Programmes/Programming%20Period%202014%20-%202020/Operational%20Programme%202/Documents/Adopted%20OPII(f).pdf

3.20 Netherlands

3.20.1 *Socio-economic Outlook*

The Netherlands is currently in the preventative arm of the Stability and Growth Pact and subject to the transitional debt rule. The government plans to reach its medium-term budgetary objective, a structural deficit of 0.5% of GDP in 2019. According to the stability programme, the Government debt-to-GDP ratio is expected to reach 65.4% in 2016 and then gradually decrease to 58.9% in 2019. The Netherlands is forecast to comply with the transitional debt rule in 2016 and more generally, with the Stability and Growth Pact.

Economic Outlook

Vast levels of household indebtedness are one of the key challenges in the Netherlands, with rigidities and distortive incentives built up over decades, which, in turn, distort housing finances and sectoral savings patterns. Since 2012, the government has implemented a series of measures but they were not entirely in line with the necessary reforms. The development of a well-functioning private rental market is constrained by subsidies in the other housing subsectors. Despite the fact that the Netherlands has one of the largest social housing sectors in the EU, housing is not always allocated in an efficient manner and on a needs-based basis.

Housing Market

The Netherlands is also in need of a pension reform given that existing compulsory non-tax contributions to the second pillar of the pension system weigh on households' disposable income. The second-pillar system has drawbacks in relation to the inter-generational fairness, transparency and resilience to economic shocks, despite performing well in terms of quality and adequacy. A potential mechanism to make the pension system more efficient is the implementation of appropriate intra- and inter-generational distribution of costs and risks beyond the rules adopted on indexation and financial buffers.

Pension system

The Dutch economy suffers from low investment in the construction sector as well as in renewable energy, potentially caused by high market uncertainty and regulatory factors. In spite of improved credit conditions, risks to new lending are heightened in the current financial environment. Furthermore, government expenditure on Rand has been falling since 2014, which the government should address as a priority.

Investment

3.20.2 *Country eGovernment and interoperability Outlook*

The Netherlands stands out as the 3rd country in the 2017 DESI report for the provision of Digital Public Services, with an increase in its absolute score from 0.64 to 0.67. Considering the 'eGovernment Users' and the 'Open Data' DESI dimensions, the Netherlands ranks 4th compared to the other countries, and 5th when looking at the 'Pre-filled Forms'. However, there is still room for improvement (11th) as far as the 'Online Service Completion' is concerned.

The following are some of the eGovernment and interoperability highlights having occurred in the Netherlands since 2016:

- **December 2016**: After a public consultation as part of the preparation for legislation on the generic digital infrastructure, the eIDAS Implementation Act passed both Chambers of

Parliament[132]. This legislation implements the ambitions of the digital government. Secure and reliable access to public services is a precondition for more intensive digital service delivery. This will be arranged through recognised public and private means. The proposed legislation will make it obligatory for public organisations to use these recognised means of authentication where use of digital public services will require for users to authenticate themselves. The legislation will also establish the competence to determine binding open standards.

- **October 2016**: TenderGalaxy, a web application allowing visitors to interactively browse the connections between Dutch government entities, their published tenders, and the businesses interested in these tenders, was launched[133]. The application makes use of the open data available from the Dutch public tender marketplace. Each tender is connected to both the government entity that published it and the businesses that are interested in participating.
- **August 2016**: Minister Plasterk (Interior and Kingdom Relations) sent a letter to Parliament describing the approach for modernising the existing DigiD system[134]. The objective of the eID policy is to modernise access to eGovernment services to achieve a higher level of trust in online identification allowing people to choose several ways to log in and identify themselves. Such a multi-solution approach makes public services safer in the event of an interference or hacking. The login solutions will be provided both by the government itself in various public domains and by private parties.

3.20.3 *Country Specific Recommendations*

The CSR issued by the European Commission for the Netherlands makes no specific mention of the need to intervene in the eGovernment and interoperability fields.

3.20.4 *National Reform Programme*

The Netherlands' NRP[135] makes no specific reference to specific measures related to eGovernment and interoperability and, therefore, no links to the TO2 and TO11 were found.

3.20.5 *Operational Programmes*

The Netherlands had one OP adopted for the period 2014-2020, with the focus on increasing inclusion through education and employment as well as promoting sustainable and quality employment. The OP related to TO8 and TO9 and has no links to either TO2 or TO11.

[132] https://eidas2018.eu/dutchmunicipalities/lessons-learned/
[133] https://joinup.ec.europa.eu/community/opengov/news/tendergalaxy-interactive-visualisation-dutch-public-tenders
[134] https://www.digid.nl/en/
[135] Netherlands 2017 NRP, available at: https://ec.europa.eu/info/sites/info/files/2017-european-semester-national-reform-programme-netherlands-en.pdf

3.21 Poland

3.21.1 *Socio-economic Outlook*

According to the European Council's recommendations for Poland, Poland is currently in the preventive arm of the Stability and Growth Pact. Poland is not expected to achieve its medium-term budgetary objective of reducing the deficit down to 1% of GDP, in structural terms, by 2019. Furthermore, based on the European Commission's 2016 spring forecast, there is a risk of a significant deviation from recommended adjustment both in 2016 and, if no changes are implemented, in 2017. Poland, hence, is currently at risk of not complying with the provision of the Stability and Growth Pact.

Economic Outlook

Currently, Poland's fiscal sustainability is at risk. This is mainly due to projected health care cost increases due to the ageing population as well as an unfavourable initial budgetary position. Poland is the only Member State without a fully-fledged independent fiscal council. Despite the fact that an expenditure stabilising rule was applied, for the first time, to the 2015 budget, it was amended later in the year to allow for higher expenditures.

Healthcare and Social Spending

Poland has taken some initiatives to increase VAT revenues in 2015; it introduced a reverse charge mechanism and the joint liability of firms in sensitive sectors. However, VAT revenues remain low despite the efforts. Fighting VAT fraud is one of the key Government priorities and Poland hopes to adopt new IT tools for detecting and combating VAT fraud and reforming tax administration.

Fiscal Framework

Polish labour market is currently facing several significant challenges. Namely, an ageing labour force, low productivity and high segmentation. In addition, the proportion of fixed-term employment contracts in Poland is amongst the highest in the Union, further adding to labour market segmentation and inflexibility. Furthermore, preferential sector-specific social security arrangements reduce labour mobility.

Labour Market

Investment activities into transport, energy and communication networks are hampered by shortcomings in the functioning of the public administration, tax system, the environment for research, development and innovation activities as well as the lengthy contract enforcement process. Weaknesses in managerial and administrative capacity, in particular, have a negative impact on the timely implementation of investment projects.

Economic and Administrative Barriers

3.21.2 *Country eGovernment and Interoperability Outlook*

In the 2017 DESI report Poland ranks 14th for the provision of Digital Public Services, as in 2016, with a slight decrease (from 0.54 to 0.53) in its absolute score. The percentage of eGovernment users increased by 25% from 2016, placing Poland 19th in the EU. When considering the 'Pre-filled Form' and the 'Open Data' DESI dimensions, however, its annual rankings dropped respectively from 11th to 12th and from 8th to 16th.

The following are some of the eGovernment and interoperability highlights that have occurred in Poland since 2016:

- **May 2017**: from May 2017 the residents of three Polish cities (Ełk, Koszalin and Łódź) will have had the opportunity to test mDocuments. Thanks to this alternative to traditional paper

and plastic documents, people will be able to access documents like ID cards and driving licences through mobile devices, like telephones with an active SIM card[136]. On 20 April 2017, an agreement on this was signed by the mayors of the three towns and the Ministry of Digital Affairs. The purpose of this pilot project will be to check how citizens evaluate the proposed solutions, get their opinions and draw conclusions on how to ensure the best possible implementation of mDocuments.

- **September 2016**: the Council of Ministers adopted the revised National Integrated Informatisation Programme (PZIP)[137]. It features a detailed Action Plan of the Minister of Digital Affairs (PD MC) which provides for measures in order to: (I) Deliver in eight priority areas: RP Portal, Digital ID, National Registers' System, Electronic Documentation Management, Data and service integration platform, Integrated Analytical Platform, Common national IT infrastructure, Open Data; (II) Finally integrate the dispersed resources; (III) Provide standardisation of public information; (IV) Provide the basis for public administration projects to be funded through the 2014- 2020 EU financial perspective.
- **June 2016**: the Ministry of Economic Development launched the Paperless, Cashless Poland Programme[138] in which jointly with business needed solutions are developed in a number of thematic streams i.e. domestic payment scheme, online fiscalisation - electronic invoices and receipts, etc.
- **April 2016**: in cooperation with the Ministry of Family, Labour and Social Policy and with private banks, the Ministry of Digital Affairs launched an online service to allow citizens to apply for family social benefits online (for the Family 500+ Project[139]). It was made available through banks' online interfaces. As many as 95% of the project's applications are filed online.

3.21.3 *Country Specific Recommendations*

The CSR issued by the European Commission for Poland makes no specific mention of the need to intervene in the eGovernment and interoperability fields.

3.21.4 *National Reform Programme*

The following links to TO2 and TO11 highlight the main priorities and planned measures in the eGovernment and interoperability domains identified in Poland's NRP[140].

Thematic Objective 2:

- **Extension of Pre-Filled Tax Return (PFR):** the aim of extending the use of pre-filled tax returns for entrepreneurs is to benefit both the tax authorities (through for example an easier verification of the submitted documents) and the entrepreneurs (thanks to a simpler and faster

[136] https://www.gov.pl/cyfryzacja/mdokumenty-jak-to-ma-dzialac-cyfrowa-rewolucja-trwa
[137] https://joinup.ec.europa.eu/news/pl-national-integrated-i
[138] https://www.mr.gov.pl/strony/aktualnosci/bez-cyfryzacji-nie-ma-rozwoju/
[139] https://www.premier.gov.pl/en/news/news/the-government-is-starting-work-on-the-family-500programme.html
[140] Poland 2017 NRP, available at: https://ec.europa.eu/info/sites/info/files/2017-european-semester-national-reform-programme-poland-en.pdf

completion of income returns). By doing so, the measure also aims to increase the number of income returns sent via electronic communication.

- **Computerisation of the Public Services:** measures concerning the computerisation of the public services continue, with special regard to the Programme of Integrated Computerisation of the State, the programme From Paper-Based to Digital Poland, and Priority Axis II of the OP Digital Poland (eAdministration and Open Government).

Thematic Objective 11:

- **Introduction of the Central Register of Restructuring and Bankruptcy**: as part of making the judicial system more efficient, the Ministry of Justice is introducing a Central Register for operation of Restructuring and Bankruptcy in the ICT system.

3.21.5 *Operational Programmes*

For the 2014-2020 financing period, Poland adopted a total of 17 OPs under ERDF relating to TO2[141]. Of those, 16 are regional and 1, Digital Poland[142], covers the entire country. The priorities of the programme are closely aligned with the Digital Agenda for Europe and all are linked to TO2. The ESF approved an OP 'Knowledge, Education and Development'[143] for Poland, which has one reform linked to TO11. This section illustrates the OPs' links to TO2 and TO11.

Thematic Objective 2:

- **Introduction of cloud computing for the delivery of electronic public services**: the infrastructure necessary to provide key digital services will be optimised through the use of cloud computing technologies. Work will be undertaken to support the creation and development of modern digital public services, especially those requiring high levels of security and integration. Under the scope of the initiative, public registries will be reorganised whilst ensuring their interoperability, cloud computing technologies will be introduced to optimise infrastructure and the security of communication and information systems will be enhanced.
- **Enhancement of access to open governmental data:** the initiative aims to make as much of raw public sector information available as possible in a machine-readable format. Efforts will be made to link the thematic systems with national and foreign systems as well as to post the information online with the use of professional tools such as raw data repositories. Additional support will also be provided for the digitisation of data in administrative sources, such as demographic data; cultural heritage resources and scientific resources.
- **Promotion of the use of electronic public services:** through public aware-rising campaigns, the government hopes that public awareness of the benefits and ease of using public digital services.

[141] http://ec.europa.eu/regional_policy/en/atlas/programmes
[142] https://www.polskacyfrowa.gov.pl/media/10410/POPC_eng_1632015.pdf
[143] https://www.funduszeeuropejskie.gov.pl/en/site/learn-more-about-european-funds/look-through-the-documents/operational-programme-knowledge-education-development-2014-2020/

The remaining 16 regional OPs focus on the above described initiatives linked to TO2 in more detail and specify the necessary finances and steps to achieve the outlined goals.

Thematic Objective 11:

- **Enhancement of the judiciary system through digitisation:** as part of the 'Knowledge, Education, and Development' Programme, the Government will channel efforts and funds into creating and modernising central court records as well as establishing the operation of digital platform for Alternative and Online dispute resolution (ADR)[144].
- **Digitisation of back-office processes in public administration:** efforts will be directed towards improving the quality of work in offices through procedures aimed at the improvement of back-office functioning. The government will implement new IT security policies and processing and protecting personal data, good practice concerning IT systems procurement and system elements.

[144] http://ec.europa.eu/consumers/solving_consumer_disputes/non-judicial_redress/adr-odr/index_en.htm

3.22 Portugal

3.22.1 *Socio-economic Outlook*

Portugal's 2016 CSR notes that it is currently experiencing macroeconomic imbalances and is in the preventive arm of the Stability and Growth Pact. Indeed, Portugal is expected to register around 1.5% GDP growth in 2016, however both its deficit and public debt remain high. However, these are expected to decrease in 2017, from 2.7% to 2.3% and from 126% to 124.5% of GDP respectively. The public debt is expected to decline to 110.3% in 2020, complying with the stability and growth pact.

Economic Outlook

In view of addressing the long-term sustainability challenges in the health sector, it is important to note that comprehensive measures aimed at promoting disease prevention as well as ensuring primary healthcare provision at an early and less costly stage, have not yet been taken. In the short term, accurate budget planning and implementation in hospitals to ensure clearance of arrears remains an important challenge. The long-term sustainability of the pension system was addressed in the recent reforms although its short- to medium-term sustainability challenges remain unaddressed. The public pension system is particularly characterised by a high reliance on budget transfers and intergenerational inequalities.

Healthcare and Social Spending

Execution delays and policy gaps hamper the fiscal sustainability of state-owned enterprises, in particular in the transport sector. Strengthening efficiency enhancing measures in their restructuring plans remains crucial to achieve fiscal savings. Considerable efforts have also been made to curb tax evasion by further improving the efficiency of the tax administration. Measures are being taken to combat tax fraud, to improve information-sharing with financial institutions, and to strengthen the anti-money-laundering framework. Despite the progress made, there is still scope for strengthening tax compliance. Reforming the tax administration to make it more efficient would also help encourage investment.

Fiscal Framework

The Portuguese labour market has been recovering and substantial efforts have been made to reform activation policies, modernise the public employment service and increase the outreach towards non-registered young people, though challenges persist. Nevertheless, absorbing the large pool of long-term unemployed remains a key challenge, negatively affecting economic growth and the social sphere. There is room for further activation of the long-term unemployed, through targeted labour market policies and enhanced coordination among employment and social services. The recovery has brought about many new jobs on permanent contracts, however segmentation in the labour market remains significant and the proportion of fixed-term employees remains one of the highest in Europe.

Labour Market

Despite progress, regulatory barriers and weak institutional capacity are still hampering business growth, competitiveness and investment. The efficiency of Portugal’s justice system remains low, particularly in dealing with tax litigation. Transparency remains a challenge for concession contracts and public-private partnerships, particularly at local and regional level. The port sector reforms still suffer from delays in implementation and obstacles to entry for new players. Although registering a business has become easier, licensing remains cumbersome and complex and unpredictable administrative procedures are detrimental to investor confidence. Challenges still exist concerning

Economic and Administrative Barriers

procedures for access to the construction market, obtaining a construction permit and the effective implementation of streamlined environmental licensing rules. Regulatory barriers in some business services sectors prevent resources from being allocated efficiently, particularly regarding legal services.

3.22.2 *Country eGovernment and Interoperability Outlook*

Portugal has fallen from the previous year`s DESI report to become the 10th country in the EU for the provision of Digital Public Services, decreasing its absolute score from 0.68 to 0.65. However, the country enjoys the 4th rank as far as 'Pre-filled Forms' and 'Online Service Completion' dimensions are concerned, and the 9th when considering 'eGovernment Users'. Portugal only ranks 25th for the 'Open Data' dimension, with a drop-in rank with respect to the last year from 16th to 25th.

The following are some of the eGovernment and interoperability highlights that have occurred in Portugal since 2016:

- **October 2016**: the Minister of the Presidency and of Administrative Modernisation, Maria Manuel Leitão Marques, presented the LABx - Laboratory of Experimentation of Public Administration, on 12 October[145]. Experimenting new solutions to improve public services and the daily life of citizens and businesses is the great objective of the laboratory, a space that will work together with users and service employees, public administration leaders and the scientific community and business. The laboratory starts with three major projects: one-stop job; the obituary desk and expense script.
- **August 2016**: Digital Mobile Key is one of eight winning Portuguese projects that will take part in this UN Global Initiative, the World Summit Award Mobile (WSA-mobile)[146]. The Digital Mobile Key, is a free-of-cost system of electronic authentication, which allows citizens to access services offered by portals and public authorities' sites, through mobile devices. A permanent key, chosen by the user, and an automatic and temporary code sent via mobile phone or email, is used for each authentication.

3.22.3 *Country Specific Recommendations*

While the CSR of Portugal makes no specific recommendations linked to eGovernment and interoperability, recital 9 highlights the large existing inefficiencies in the healthcare sector, such as delayed payments. Hence, an opportunity can be seen in the area of introduction of eHealth.

3.22.4 *National Reform Programme*

The following links to TO2 and TO11 highlight the main priorities and planned measures in the eGovernment and interoperability domains identified in Portugal's NRP[147].

[145] https://labx.gov.pt/
[146] https://cmd.autenticacao.gov.pt/Ama.Authentication.Frontend/default.aspx
[147] Portugal 2017 NRP, available at: https://ec.europa.eu/info/sites/info/files/2017-european-semester-national-reform-programme-portugal-pt.pdf

Thematic Objective 2:

- **Implementation of the SIMPLEX+ Programme**: launch of the SIMPLEX+ programme as a single national programme of measures, which have as their main objective to make life simpler for citizens and businesses in their interaction with public services. It aims to contribute to a more competitive economy and to strengthen the trust between citizens and the state.
- **Increase in the access to broadband and 4G networks:** as a way to innovate the Portuguese economy by giving widespread access to the digital market, the government is working to guarantee higher levels of optical fibre network coverage and 4G mobile networks.

Thematic Objective 11:

- **Digital modernisation of Justice:** this technical modernisation plan (*Justiça + Próxima*) aims to streamline court proceedings, reduce the backlog and increase the transparency of the judiciary. Of the 138 measures submitted by January 2017, 24 were completed and another 12 measures were added, totalling 150.
- **Launch of ICT Strategy 2020**: the strategy for the Digital Transformation of the Public Administration was approved in February 2017 and aims at a more widespread cross-entity use of ICT. Its main focus is on integration and interoperability, innovation and competitiveness, sharing of resources through, for example, 'cloud' storage system.

3.22.5 *Operational Programmes*

For the funding period 2014-2020, Portugal has adopted a national OP specifically dealing with the themes related to TO11 and TO2, **'**Operational Programme for Competitiveness and Internationalisation'[148]. The programme contains funding priorities and planned reforms that link to the themes addressed in this study. The OP for Portugal makes specific emphasis on the re-organisation and enhanced institutional capacity-building.

The following section will highlight the main project areas that link to TO2 and TO11. This OP addresses two key dimensions that are intrinsically linked to the enhancement of digital public services.

Thematic Objective 2:

- **Improvement of the quality and availability of electronic public services:** the Portuguese government is actively seeking to strengthen the application of ICT in Public Administration in order to help businesses gain competitiveness and improve the business environment by improving the quality and availability of online services, better internal organisation and increased institutional capacity.

Thematic Objective 11:

[148] Competitiveness and Internationalisation OP, available at: https://www.portugal2020.pt/Portal2020/Media/Default/Docs/Programas%20Operacionais/TEXTOS%20INTEGRAIS%20DOS%20PO/PO_ISE_17Nov14.pdf

- **Enhancement of the digital capabilities of public servants:** the OPs also looks also at enhancing institutional capacity in public administration by investing in the training of civil servants, who will participate directly in the public administration modernisation process/restructuring, as well as those involved in the rolling out of new digital public services.

3.23 Romania

3.23.1 *Socio-economic Outlook*

Romania is currently experiencing a positive macro-economic juncture, with debt-to-GDP expected to remain below 40% in the foreseeable future. The European Commission's 2016 spring forecast, however, projects a general government deficit of 3.4% of GDP for 2017, above the 3% of GDP reference value of the Treaty.

Economic Outlook

Delays in adopting transparent recruitment, appraisal, salaries and career progression methods across staff categories, alongside unstable organisational structures, have a negative impact on the civil service's independence and efficiency. Complicated administrative procedures, an inefficient public procurement system, together with widespread corruption, continue to impact the delivery of services. High-level corruption is still present and involves officials at all levels of the government and the civil service. Major concerns also remain about the high workload in courts, the enforcement of decisions and the external pressure on the judiciary.

Administrative Capacity

Structural barriers hinder the transition to a higher value-added economy and limit Romania's ability to foster sustainable growth. The complexity of administrative procedures, the volatility of fiscal and tax policies and the weak business environment, continue to weigh on investment decisions.

Economic and Administrative Barriers

The fiscal framework in Romania remains weak; the Fiscal Council, for example, has little influence on policy-making. A number of measures, though, are being implemented to improve tax collection and increase tax compliance. These include mandatory cash registers, strengthened cash-payment rules, a new VAT registration procedure, and intensified auditing by the tax authority. However, tax evasion and a low tax compliance levels remain considerable challenges.

Fiscal Framework

The unemployment level has remained low and the employment rate has been increasing. Indeed, long-term unemployment is below the EU average. However, it remains significantly high among the young. The National Employment Agency is not offering personalised services to jobseekers and has limited services for employers. Cooperation between employers and social services is still very limited, and activating social assistance beneficiaries remains hard.

Labour Market

Health is a domain where Romania lags significantly behind its neighbours; life expectancy at birth is below the EU average, for both men and women. Access to healthcare is fairly uneven, and is hampered by the fact that a reliance on informal payments hinder the chances of people on low income to access healthcare. Further efforts must be done to increase the sustainability of pharmaceutical spending, by implementing e-health solutions, shifting resources from hospital-based care to preventive care, and centralising procurement procedures. The efficiency of the health system is constrained by a lack in administrative capacity and delays, in switching from inpatient to outpatient healthcare.

Healthcare

3.23.2 *Country eGovernment and Interoperability Outlook*

For Digital Public Services, Romania scores 0.33 (up from 0.27 last year) and improved its ranking to the 27th position[149]. Romania's offer of online public services is among the least sophisticated in the EU. Its indicator scores are among the last in the EU and show that it is imperative for Romania to improve the sophistication and availability of its digital public services. Better online public services will also likely improve Romania's percentage of eGovernment users (8% of Internet users, the lowest in the EU). Romania, however, made significant progress on promoting Open Data scoring 435 (increased from 270).

The following are some of the eGovernment and interoperability highlights[150] that have occurred in Romania since 2016:

- **December 2016:** the Ministry of Communications and Information Society developed and published the public the National Interoperability Framework (NIF), which will reinforce and support further implementation of the National Strategy for Romania's Digital Agenda 2020;
- **July 2016:** the Romanian Government passed the Government Emergency Ordinance no. 41/2016[151]. This ordinance obliges public authorities to accept electronic documents by citizens or business with a qualified or advanced electronic signature, and reuse any personal data previously delivered to the public administration. It also stipulated rules concerning source code for ICT systems developed under an eProcurement contract.
- **April 2017:** the Ministry of Communication and Information Society, in partnership with Government General Secretariat, launched a three-year project 'Establishment of Development Tools for eGovernment'[152]. The main objectives of the project are to consolidate electronic public services in 'life events', according to the targets set in the Digital Agenda for Romania 2020, and also to ensure the legislative, institutional, procedural and operational tools for eGovernment.

3.23.3 *Country Specific Recommendations*

The CSR issued by the European Commission for Romania makes no specific mention of the need to intervene in the eGovernment and interoperability fields. An analysis of the CSRs and recitals, however, reveals areas in which digital solutions could be applied successfully. Indirect links to eGovernment and interoperability can be made from recitals 16 and 18 where digital solutions are suggested as answers to solving existing public administration or service delivery concerns. Examples of this are presented below.

In recital 16, for example, the implementation of eHealth solutions is listed among some of the solutions being implemented to address the current problems in the healthcare sector[153]. It also states that 'the

[149] Digital Single Market Scorecard for Romania, available at: https://ec.europa.eu/digital-single-market/en/scoreboard/romania
[150] https://joinup.ec.europa.eu/sites/default/files/inline-files/eGovernment_in_Romania_March_2017_v2_00.pdf
[151] http://stratulat-albulescu.ro/measures-adopted-by-the-government-for-reducing-bureaucracy/
[152] https://www.comunicatii.gov.ro/?page_id=6476
[153] Recommendation for a Council Recommendation on the 2017 National Reform Programme of Romania and delivering a Council opinion on the 2017 Convergence Programme of Romania, COM(2017) 522 final, Brussels, 22.5.2017.

lack of administrative capacity is delaying implementation of the 2014-2020 national health strategy. In particular, the efficiency of the health system is constrained by delays in streamlining the hospital sector and switching from inpatient to more cost-effective outpatient healthcare'.

This recital is linked to recommendation Nº3 'Curb informal payments in the healthcare system and increase the availability of outpatient care'. It can, thus, be construed that eHealth solutions, relating to TO2, can address enduring issues in the health sector that are mentioned in the recommendations.

Additionally, in recital 18, the document makes a clear reference to eGovernment services and how they could be hindered by continuing corruption and lack of public administration capacity 'Complicated administrative procedures, an inefficient public procurement system and widespread corruption constrain the delivery of services (including eGovernment services)'. This recital is linked to recommendation Nº3, which also stresses the need to 'Strengthen the independence and transparency of human resources management in the public administration. Simplify administrative procedures for business and the public.' In this case, it can be construed that eGovernment could offer a solution to some long-lasting issues related to public administration, such as lack of transparency. This would link the recommendation to TO11.

3.23.4 *National Reform Programme*

The following links to TO2 and TO11 highlight the main priorities and planned measures in the eGovernment and interoperability domains identified in Romania's NRP[154].

Thematic Objective 2:

- **Simplification of procedures and access to documentation for obtaining planning and construction authorisation**: the government aims to simplify the procedures for obtaining construction authorisation and develop the access to documentation through eGovernment tools, by creating an application for accessing the legislation, technical regulations, and the approval and authorisation flows as well.
- **Implementation of the Public Procurement Directive**[155]: the NRP identifies public procurement as a key area in need of improvement and suggests improving the capacity of the contracting authorities to use electronic procedures. More specifically, in February 2016, the government approved the legislative package for the transposition into national legislation, including the Directive 2014/24/EU on public procurement[156]. Furthermore, in order to stimulate tax receipts' issuance/request, spot checks concerning the use of electronic cash registers will be intensified**.**

Thematic Objective 11:

- **Establishment of electronic one-stop shops**: in order to improve administrative procedures, the government plans to develop a new generation of electronic interoperable

[154] Romania 2017 NRP, available at: https://ec.europa.eu/info/sites/info/files/2017-european-semester-national-reform-programme-romania-en.pdf
[155] http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex:32014L0024
[156] https://ec.europa.eu/growth/single-market/public-procurement/e-procurement_en

one-stop-shops. The development of the electronic procedures for the simplification of some horizontal and trans-sectoral procedures for business environment will also continue using a one-stop shop, to obtain documents online and make payments.

- **Establishment of a public registry for unemployed youth**: to facilitate the integration of NEETs (youth not in employment, education or training) in the workplace, an Electronic NEETs People Registry will be put in place to ensure the interoperability of data provided by administrative bodies, such as the General Registry of Population, National Agency for Fiscal Administration and the Labour Inspectorate among others.
- **Achievement of interoperability of the educational registry across public organisations**: for the development and integration of education and research IT system, the operationalisation of the educational registry will link data certified by universities on the status of an individual enrolled in higher education to achieve interoperability with the central institutions.
- **Introduction of an electronic registry of streets**: an electronic registry of streets' nomenclature will be introduced to accelerate the land registration process. This will be part of a draft Law on the Integrated System for Land Registry and Cadastre, adopted at the end of 2016[157].
- **Completion of the national interoperability framework:** the completion of a national interoperability framework to streamline public activities will improve the provision of digital services to citizens. The national interoperability framework is considering implementing a unique authentication in the public administration systems, a unified access to electronic public services, and defining the primary databases and the way to interconnect them, in order to improve the collaboration mechanisms between the public administration systems.
- **Establishment of a framework for new eGovernment solutions**: to improve eGovernment solutions, the National Strategy on Digital Agenda for Romania 2020 (NSDAR) is launching the first phase of the project establishing the framework for the development of eGovernment tools. The project aims to create a horizontal framework for the definition of common standards and promote access to quality electronic services.
- **Implementation of the NIS Directive**: Ministry of Communications and for Information Society has drafted a new 'Law on Romania's cybersecurity' that is currently open for public consultation. Romania continues to strengthen the capacity of the Romanian National Computer Security Incident Respondent team and the government is planning to implement the principles provided in the NIS Directive[158].

[157] http://www.euroavocatura.ro/legislatie/1255/Legea_cadastrului,_Actualizata_2017__LEGEA_nr__7_1996_a_cadastrului_si_a_publicitatii_imobiliare

[158] https://ec.europa.eu/digital-single-market/en/network-and-information-security-nis-directive

3.23.5 *Operational Programmes*

For the funding period 2014-2016, Romania adopted two national OPs specifically dealing with the themes related to TO2 and TO11, the OP for 'Administrative Capacity'[159] and the OP for 'Competitiveness'[160]. These programmes contain funding priorities and planned reforms that link to the themes addressed in this study.

This section highlights the main project areas linking to TO2 and TO11.

Thematic Objective 2:

- **Improvement of digital service delivery:** the OPs for 'Competitiveness' will support activities that lead to the optimisation and improvement of the quality of services offered by the government for business. To this end, it will support the introduction and use of eGovernment and ICT, at the level of local public authorities, in order to reduce administrative burdens for users of these public services.
- **Introduction of ICT infrastructure for eHealth applications**: the OP for 'Competitiveness' aims to build the necessary infrastructure for the introduction of a health information system and the development of telemedicine solutions. Together with the development of an integrated IT system for e-Health. The OP also targets the development/strengthening of existing information systems and enhancing their interoperability.
- **Application of new technologies for better public services:** in order to modernise the current offering of digital public services, the Romanian government is planning to strengthen the interoperability of IT systems of eGovernment services for businesses and citizens. These systems will be modernised through the application of new technologies, such as open data and cloud computing.

Thematic Objective 11:

- **Introduction of a horizontal eGovernment framework:** the OP of Romania supports measures to increase the quality of ICT in public administration through the preparation of a horizontal framework for eGovernment development and the increase of ICT usage in public administration.
- **Enhancement of service efficiency through new information systems:** additional investment will be directed to the installation of new information systems that aim to reduce the response time of the authorities and public institutions to external events. This will also improve efficiency, and facility access to public services by citizens and businesses.
- **Development of IT solutions to enhance the re-profiling of the cases under (ECRIS):** the OP for 'Administrative Capacity' aims to implement statistical data analysis, electronic archiving of files, and automatic writing to dictation to speed up the drafting of decisions issued by the public prosecutor. The Public Ministry, National Anti-Corruption Directorate and

[159] http://www.fonduri-ue.ro/poca-2014
[160] http://www.kormany.hu/download/f/0e/b0000/day1_pres2_Svetlana%20Gombos.pdf

Directorate for Investigation of Organised Crime and Terrorism also plan to adopt software to analyse and process information available on corruption cases, which will require additional IT system development.

3.24 Slovakia

3.24.1 *Socio-economic Outlook*

Slovakia is experiencing a positive economic period. Its GDP growth is sustained and public finances are under control. The government plans to improve the headline balance towards deficit of 1.9% of GDP in 2016 and to the deficit of 1.3% of GDP in 2017. According to the stability programme, the medium-term budgetary objective, a structural deficit of 0.5% of GDP, would be reached in 2019. Additionally, the government debt-to-GDP ratio is expected to reach 52.9% in 2016[161] and to continue decreasing over the next few years.

Economic Outlook

The long-term sustainability of public finances in Slovakia remains, however, a challenge. This is mainly due to the ageing of society and the associated expanding healthcare and pension costs. Public healthcare expenditure is projected to grow substantially in the long term. Several key measures have been identified as solutions to increase the cost-effectiveness of the healthcare sector, such as improving measures in both inpatient and outpatient care. Efforts to introduce an integrated model of care continue.

Healthcare and Social Spending

With regard to taxation, government measures to fight tax fraud have contributed to better tax collection, in particular in the area of value added tax (VAT). However, despite this, VAT avoidance remains a challenge. Other areas of taxation remain an issue as well and tax-debt collection remains underdeveloped.

Fiscal Framework

Slovakia still suffers from weak administrative capacity and effective coordination among institutional bodies is still lagging, due to the fragmented and rigid organisation of the public administration. In particular, Slovakia has a limited track record of initiating criminal proceedings and prosecuting corruption cases, including illicit practices in public procurement. Unconsolidated governance, lack of evidence-based design of public procurement procedures and conflicts of interest result in limited quality-based competition. Public procurement weaknesses are persistently reported as affecting the efficiency of public resources' allocation.

Administrative Capacity

Frequent changes to legislation and burdensome administrative procedures and barriers affect businesses in Slovakia. High regulatory barriers in some professional services and network industries, weaknesses in contract enforcement and insolvency resolution and long-standing concerns regarding the quality of the judicial system harm the business environment and discourage investment.

Economic and Administrative Barriers

3.24.2 *Country eGovernment and Interoperability Outlook*

Slovakia ranks 23rd in the 2017 DESI report for the provision of Digital Public Services, with a considerable increase in its absolute score from 0.29 to 0.42. This progress is mainly witnessed when considering the ‘Open Data’ DESI dimension which increases by 74%, placing Slovakia 9th in the EU. However, the country shows some weaknesses when looking at the ‘eGovernment Users’ and ‘Online

[161] Recommendation for a Council Recommendation on the 2017 National Reform Programme of Slovakie and delivering a Council opinion on the 2017 Stability Programme of Slovakia, COM(2017) 524 final, Brussels, 22.5.2017.

Service Completion' dimensions, for which Slovakia ranks 24th compared to the other countries, but with a positive trend with respect to the previous years.

The following are some of the eGovernment and interoperability highlights having occurred in Slovakia since 2016:

- **September 2016**: the Slovak government approved the National Concept of eGovernment[162]. This conceptual document defines the strategic Enterprise Architecture of eGovernment and its central coordination as well as the principles and objectives of its further development in accordance with the goals stated in the Strategic Document for Digital Growth and Next Generation Access Infrastructure. This document also represents a new philosophy of viewing informatisation. The concept is built around a vision of an innovative and open state that provides citizens and businesses with user-friendly and easy-to-use services, which at the same time operates in a complex way, to respond swiftly and effectively to modern challenges.
- **April 2016:** the operation of the Central Metainformation System of Public Administration was launched[163]. The Central Metainformation System supports the management of public administration eGovernment components and policy-making in the information society field, as well as the objectives of an efficient public administration.
- **March 2016:** the Action Plan for the Implementation of the Cyber Security Concept of the Slovak Republic for 2015-2020 was established[164]. This Action Plan defines tasks, roles and cooperating parties responsible for its completion. The strategic goal of cyber security in the Slovak Republic is to achieve an open, secure, and protected national cyber space by building trust in the reliability and security of, above all, critical information and communication infrastructure, as well as building of certainty that this will perform its functions and serve national interests also in cases of cyber-attacks.

3.24.3 *Country Specific Recommendations*

While the CSR issued by the European Commission for Slovakia makes no direct recommendations in the field of eGovernment and interoperability, recital 9 explicitly mentioned that Slovakia is slow in its introduction of eHealth measures to improve the efficiency of the healthcare sector. The mention is closely linked to TO2.

Furthermore, recital 13 stresses the fact that corruption remains high in the public administrations, despite the ongoing efforts to modernise the public sector. In particular, it mentions that public procurement practices fall 'short of best practices in many areas'. Hence, an opportunity to apply eProcurement measures in order to modernise the public procurement system of Slovakia can be identified here. Once again, this closely links to TO2.

[162] http://www.informatizacia.sk/narodna-koncepcia-informatizacie-verejnej-spravy--2016-/22662c
[163] https://metais.finance.gov.sk/
[164] http://www.nbusr.sk/kyberneticka-bezpecnost/strategicke-dokumenty/index.html

A further opportunity for eGovernment intervention can be identified in Recommendation Nº3, which calls upon Slovakia to 'improve the effectiveness of the justice system'. To this end, eJustice measures could help to make the judiciary system more efficient and transparent.

3.24.4 *National Reform Programme*

The following links to TO2 highlight the main priorities and planned measures in the eGovernment and interoperability domains identified in Slovakia's NRP[165].

Thematic Objective 2:

- **Implementation of eHealth:** starting from 2018 Slovakia will implement its eHealth plan. Among the eHealth sections to be implemented by the beginning of 2018 there are the National Health Portal, the ePrescription, eMedication and the Electronic Health Documentation.
- **Use of eInvoicing in the public procurement:** by November 2018 the launch of the electronic invoicing for the contracted authorities at the central level is expected. It is planned to extend the use of eInvoicing for all administration levels within a year.
- **Implementation of eGovernment:** with the goal of the modernising the public administration through information technologies, the Investment and Digitisation Government Office of the Slovak Republic (DPMIIGO) has launched an eGovernment Action Plan for 2016-2020, which put forward rules for IT projects from the planning and organisation phase until their monitoring and assessment. DPIIMOG also launched an Action Plan for Uniform Digital Market – Opportunity for Slovakia 2017-2020, which outlines plans for better data management, digitisation of public services and development of online platforms to foster a more collaborative economy.
- **Introduction of two-way Electronic Communication with Business:** in order to reduce the burden placed on businesses, the government is promoting the use of electronic communication, especially with regard to tax paperwork, and particularly the VAT, and is providing pre-filled forms of certain types of tax returns. Another important measure is the automation of customs surveillance over imported good, eImport.

3.24.5 *Operational Programmes*

For the funding period 2014-2016, Slovakia has approved one national OP specifically dealing with the themes related to TO2, 'Integrated Regional Operational Programme' under ERDF and one OP strongly linked to TO11 under the ESF 'Effective Public Administration'. This section highlights the main project areas linking to TO2 and TO11.

[165] Slovakia 2017 NRP, available at: https://ec.europa.eu/info/sites/info/files/2017-european-semester-national-reform-programme-slovakia-sk.pdf

Thematic Objective 2:

- **Digitisation of public procurement:** under the 'Integrational Regional Operational Programme'[166] and in order to fulfil Directives 2014/23/EU[167], 2014/24/EU[168] and 2014/25/EU[169], the Slovak government plans to modernise its public procurement process through digital tools and include: direct and unrestricted access to procurement documents online, online submission of tenders by electronic means, strengthening the role of eCertis guidelines in public procurement, introducing electronic form (PAS) for tenderers to prove compliance with criteria and adding electronic catalogues.
- **Modernisation of the healthcare sector facilities through the application of open data and digital tools:** the 'Integrated Regional Operational Programme' for Slovakia refers to eHealth in the context of the modernisation of the healthcare sector, where it suggests the creation and use of open data in healthcare. This will be implemented alongside a general modernisation of infrastructure of hospitals and health centres, together with the application of telemedicine tools.
- **Promotion of the use of open data:** under the OP 'Effective Public Administration'[170], support will be provided to increase the transparency of public administration through promotion of open data and creation of an appropriate environment for its digitisation.

Thematic Objective 11:

- **Enhancement of interoperability across public administrations:** under the ESF funds, management systems of public administration will be updated and integrated to enhance interoperability and ensure horizontal integration of provided services.
- **Creation of a central eGovernment portal for all digital public services:** all digital services will be provided in one place, www.slovensko.sk, where citizens and businesses will also be able to access current and complete information on services.
- **Implementation of eInvoicing Directive[171]:** following its transposition, necessary conditions for the introduction of measures supporting the development of digital invoicing services will be established.
- **Introduction of electronic court records in the judiciary system**: in order to make the judiciary's administrative process more efficient and faster, electronic court records and electronic exchange of information will be introduced.

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[166] http://www.strukturalni-fondy.cz/getmedia/a1500e9a-34af-4a8e-b6cb-8e0b119f26d4/Programming-document-of-IROP.pdf?ext=.pdf

[167] Directive 2014/23/EU of the European Parliament and of the Council of 26 February 2014 on the award of concession contracts, OJ L 94, 28.3.2014, p. 1-64.

[168] Directive 2014/24/EU of the European Parliament and of the Council of 26 February 2014 on public procurement and repealing Directive 2004/18/EC Text with EEA relevance, OJ L 94, 28.3.2014, p. 65–242.

[169] Directive 2014/25/EU of the European Parliament and of the Council of 26 February 2014 on procurement by entities operating in the water, energy, transport and postal services sectors and repealing Directive 2004/17/EC Text with EEA relevance, OJ L 94, 28.3.2014, p. 243–374.

[170] Effective Public Administration OP, available at: https://www.google.fr/url?sa=t&rct=j&q=&esrc=s&source=web&cd=3&cad=rja&uact=8&ved=0ahUKEwi85rfN2frPAhXLuBoKHVI2AtMQFggpMAI&url=http%3A%2F%2Fwww.minv.sk%2F%3Fopevs%26subor%3D218881&usg=AFQjCNHZr0UIXLa09MOSnTMVZOOn7waF9Q&sig2=ZkmB7r8W9E8vPvKyx2nqSw&bvm=bv.136811127,d.d2s

[171] Directive 2014/55/EU of the European Parliament and of the Council of 16 April 2014 on electronic invoicing in public procurement Text with EEA relevance, OJ L 133, 6.5.2014, p. 1–11

3.25 Slovenia

3.25.1 *Socio-economic Outlook*

Economic Outlook

Slovenia is experiencing a moderate economic recovery (1.7% GDP growth in 2016[172]), which will further be maintained into 2017. Although, public debt levels remain high at 80.2% of GDP, they are expected to diminish significantly by 2017. Additionally, in its 2016 stability programme, the government plans a gradual improvement of the headline balance from 2.2% in 2016 to 0.4% of GDP in 2019.

Healthcare

Public expenditure on public healthcare is expected to grow steadily in the coming decades, due to a rapidly ageing population. Significantly, the healthcare system in Slovenia does not provide an integrated long-term care system, focusing on cost-inefficient in-patient system and not investing enough in out-patient care. A comprehensive review of the healthcare system has recently been completed and the National Healthcare Resolution Plan 2016-2025 was adopted by the parliament in March 2016.

Labour Market

The levels of unemployment have been reducing in the last number of years, standing at 8.6% in 2016. However, participation rates of older and low-skilled workers remain a challenge. Long-term unemployment still represents more than half of all unemployment with a significant share of the long-term unemployed being low-skilled or older than 50 years of age. Further measures to prolong working lives, including adapting the working environment, are needed to sustain the pension system. The implementation of the government's pension reform should further aid the sustainability of the pensions' system.

Administrative and Regulatory Barriers

Slovenia's business environment remains hindered by a high level of administrative burden, particularly in the areas of construction, spatial planning and tax compliance, but also due to restrictive regulation on access to and exercise of regulated professions, which impedes the inflow of investment. Slovenia needs to further eliminate inefficiencies in public administration and red tape stemming from a high number of laws and by-laws and frequent changes to legislation. There has been some progress in the implementation of 'Zero Tolerance of Corruption' programme. However, certain measures of the programme (joint public procurement for health, examination of crime in the banking sector and prevention of corruption) have been delayed.

3.25.2 *Country eGovernment and Interoperability Outlook*

As far as the provision of Digital Public Services is concerned, Slovenia ranks 16th in the EU, improving its absolute score from 0.45 to 0.51. The main improvement can be seen when considering the 'Open Data' DESI dimension, which places Slovenia 12th in the European Union, with a 60% increase from last year. However, the percentage of 'eGovernment Users' declined by 22% compared with the 2016 DESI report, with Slovakia dropping from the 19th to the 22nd place.

[172] http://ec.europa.eu/economy_finance/eu/countries/slovenia_en.htm

The following are some of the eGovernment and interoperability highlights having occurred in Slovenia since 2016:

- **January 2017:** a new portal called zVEM (One-Stop Shop for eHealth) was introduced[173]. Every authenticated user can use their digital certificate to access their own data in the eHealth databases, review electronically prescribed and dispensed medication, information on waiting times and electronically issued referrals through a single portal.
- **December 2016:** the project to reform the system for the publication of public sector open data began. This resulted in the introduction of the national Open Data Portal (OPSI). The portal was created using the source code of the British Open Data portal[174] . In addition to the development of the portal, a handbook was introduced promoting the opening up of public sector data. Along with development of the portal, the legislation on open data was also revised. This will set the groundwork for the creation of the so-called Open Data Ecosystem in 2017. Moreover, due to the changes in the public procurement legislation, the eSubmission module in the framework of electronic procurement, which allows for the electronic submission of tenders, public opening of the bids and the electronic transfer of tenders to subscribers, is currently being upgraded so that full compliance with the new legislation takes effect from this month.
- **June 2016:** the eDossier module of the electronic public procurement framework, intended to verify compliance with the conditions of providers in the official records, has been in use since June.
- **February 2016:** the establishment of Statist took place[175]. It is available to the general public and provides a comprehensive, direct and updated publication of data on the submitted public procurement contracts in the Republic of Slovenia.

3.25.3 *Country Specific Recommendations*

Whilst the CSR by the European Commission for Slovenia makes no direct recommendation of the need to intervene in the eGovernment and interoperability fields, an opportunity to apply eHealth solutions can be identified. Recital 12 mentions remaining challenges in the healthcare system of Slovenia, despite ongoing government efforts. In particular, the governance of hospitals, hospital payment systems as well as information systems need to be significantly improved.

Furthermore, the CSR of Slovenia mentions the need to further improve the judiciary system, namely at the present moment citizens of Slovenia are unable to submit claims 'by electronic means'. The need for improvement of the judiciary through eJustice measures, just like the eHealth intervention mention above, links to TO2.

[173] http://www.ezdrav.si/zvem/
[174] https://joinup.ec.europa.eu/news/new-slovenian-open-data-porta
[175] http://www.mju.gov.si/en/areas_of_work/transparency_and_open_data/

3.25.4 *National Reform Programme*

The following links to TO2 and TO11 highlight the main priorities and planned measures in the eGovernment and interoperability domains identified in Slovenia's NRP[176].

Thematic Objective 2:

- **Construction of broadband infrastructure in rural areas:** given the enormous growth potential of digitisation, Slovenia aims to prepare and implement a public call for co-financing broadband access in rural areas, setting a goal of at least 100 Mb/s broadband Internet access to all households by 2020. This should provide the rural population with equal possibilities for integration in the modern digital world.
- **Digitisation of public procurement**: the focus in 2017 and 2018 will be on the comprehensive digitisation of public procurement (completion of the eOddaja, eDosje and eKatalog modules), along with the completion of the IT solution, Statist.

Thematic Objective 11:

- **Establishment of a national authority for cybersecurity:** at a strategic level, Slovenia is planning to establish a national authority for cybersecurity, while it continues in its efforts to reinforce the bodies at a more operational level.
- **Renovation of the legal protection system:** The aim of this measure is to improve the level of legal protection, along with its efficiency, computerise the integrated legal protection process and maintain fast procedures. It should also lead to more predictable public procurement procedures. The renovation is expected to be completed before the end of 2017.
- **Centralisation of the government IT system:** in an effort to consolidate the information and communication infrastructure, Slovenia is putting forward the migration of information systems to the national computing cloud, the establishment of a system for data management, the consolidation of basic data registers for establishing uniform methodologies, standards and processes, the upgrade of the renovated eAdministration and eVem portals and the renovation of the information system for documentary material management.

3.25.5 *Operational Programmes*

For the funding period 2014-2020, Slovenia has adopted one OP, 'Operational Programme for the Implementation of the EU Cohesion Policy in the period 2014-2020'[177]. The OP draws funds from a total of four European Funds and has 11 funding priorities. The programme contains funding priorities

[176] Slovenia 2017 NRP, available at: https://ec.europa.eu/info/sites/info/files/2017-european-semester-national-reform-programme-slovenia-en.pdf
[177] http://www.eu-skladi.si/sl/dokumenti/kljucni-dokumenti/op_ang_final_web.pdf

and planned reforms that link both to TO2 and TO11. This section highlights the main project areas that link to TO2 and TO11.

Thematic Objective 2:

- **Improvement of open data applications and infrastructure**: in order to ensure a correct implementation of the EU Directive on the re-use of public sector information[178], the government will improve the technical and semantic interoperability of back-office IT systems, through the development of common buildings blocks horizontal applications, basic data registries and open data publishing platform. Based on users' needs, highly automated and reliable publication of data in open formats might be developed.

Thematic Objective 11:

- **Set up of a monitoring system to fight against corruption**: in its aim to fight corruption in the public service analytical, semantic and technical actions to reduce corruption risks will be implemented in cooperation with the 'Commission for the Prevention of Corruption and NGOs'. A central web platform for monitoring all risks will be set up in public administration together with an information tool for effective monitoring of the use of public finances. Furthermore, eProcurement will be upgraded through the establishment of transparency of public procurement procedures and calls for proposals.
- **Introduction of an IT tool for assessing the impacts of new proposed legislations**: objective N°4 of the OP focuses on improving the legislative framework and upgrading eServices in order to make the public administration more user oriented. In order to perform better impact assessments, a new IT tool will be created, which will design a qualitative and quantitative comprehensive assessment of the impacts of regulations, primarily the assessments of the impacts of regulations on the economy.
- **Introduction of a spatial and real estate registry**: the OP for Social Cohesion for Slovenia looks at establishing efficient spatial management and real-estate registration platform through the introduction of its eProstor[179] (eSpatial) programme. eProstor is to provide a single infrastructure for spatial information, a spatial information system as well as renovation of the real-estate records system.
- **Enhancement of the judiciary system through digitisation** IT solutions of the justice system will be renewed and upgraded as needed. Furthermore, necessary registers and web portals will be developed and case files will be digitalised. IT systems will be upgraded in order to support fast track procedures.

[178] Directive 2013/37/EU of the European Parliament and of the Council of 26 June 2013 amending Directive 2003/98/EC on the re-use of public sector information, OJ L 175, 27.6.2013, p. 1–8
[179] http://www.e-prostor.gov.si/

3.26 Spain

3.26.1 *Socio-economic outlook*

Despite the political uncertainty following two legislative elections, the macro-economic outlook for Spain is improving from the crisis levels of recent years, as growth is predicted to reach 2.6 per cent[180]. In its 2016 stability programme, Spain also plans to achieve headline deficit targets of 3.6% of GDP in 2016 and 2.9% of GDP in 2017[181]. The debt-to-GDP ratio in 2015 was 99.2% of GDP and is expected to decline to 96% of GDP in 2019. The European Commission 2017 Spring Forecast projects the deficit of 3.1% of GDP in 2017, above the headline targets in the stability programme.

Economic Outlook

Since 2012, Spain's fiscal framework has been strengthened in order to prevent deviations and ensure compliance by all government levels with their respective deficit, debt and expenditure targets. Despite this, in 2015, most regions as well as the social security sector fell significantly short of meeting their targets. For example, a rule to limit growth in expenditure on healthcare was signed in November 2015 to help rationalise spending on pharmaceuticals. Despite this, in 2015, most regions fell short of meeting their domestic fiscal targets. The law's expenditure rule was not observed by the central, regional and local government subsectors and growth in expenditure of pharmaceutical products, namely by hospitals, was pronounced.

Fiscal Framework

Spain has taken various measures to foster business growth. For example, a recent law on business financing is expected to facilitate access to finance for SMEs. Furthermore, prior assessment of the potential impact of new legislation on SMEs has now become compulsory. However, the time and number of permits required for starting a business remains high. Spain's regional regulatory differences may limit firms' capacity to grow. The law on market unity aims to reduce barriers to business across Spanish regions and to improve regulation. Apart from the transposition of the Services Directive into Spanish law, there has been no progress on a horizontal reform of the regulatory framework for regulated professions. The reform aimed to define the professions requiring registration in a professional organisation, increasing transparency and accountability of professional bodies has not been adopted.

Economic and Administrative Barriers

In the field of public procurement, efforts have been made to rationalise public purchasing, in particular using joint procurement mechanisms. However, there are disparities in the implementation of public procurement across administrations and insufficient control mechanisms hinder the correct application of public procurement rules. The number of presumed breaches of EU public procurement legislation, which have been brought to the European Commission's attention in recent years, has remained relatively high.

Public Procurement

The effectiveness of active labour market measures heavily depends on the capacity of employment services to design and offer individualised support. Recent reforms are progressing slowly and the capacity of the public employment services to provide effective individual support is limited.

Labour Market

[180] http://www.imf.org/external/country/ESP/index.htm

[181] Recommendation for a Council Recommendation on the 2017 National Reform Programe of Spain and delivering a Council opinion on the 2017 Stability Programme of Spain, COM(2017) 508 final, Brussels, 22.5.2017.

Cooperation between the regional public employment services and private placement agencies remains limited. Moreover, cooperation between employment and social services is uneven across regions, hampering the provision of services. In addition, information about the transition to employment from minimum income schemes is quite limited, hindering the prospect of strengthening the institutional cooperation needed to address unemployment.

3.26.2 *Country eGovernment and Interoperability Outlook*

Spain's performance in providing Digital Public Services slightly deteriorated from last year, with the country dropping from the 5th to the 6th rank in the EU. Spain shows further improvements in the 'Open Data' and 'eGovernment Users' DESI dimension, for which it ranks respectively 1st and 11th as compared to the other countries. As far as 'Online Service Completion' is concerned, however, the country scored less than the last year, ranking 11th in 2017 and 7th in 2016.

The following are some of the eGovernment and interoperability highlights having occurred in Spain since 2016:

- **November 2016:** the Interoperability agreement of Electronic Signature and Seal Policy and certificates of the Administration was published[182]. The new technical interoperability standard replaces the previous Electronic Signature and Certification Policy of the Administration and is aligned with the eIDAS Regulation (EU) 910/2014 on electronic identity and services of confidence.
- **October 2016:** the new administrative laws 39/2015[183] and 40/2015[184] entered into force. They transform the relationship of citizens and businesses with the administration. The laws 39 and 40 establish new faster and transparent procedures and the disappearance of paper administrative barriers. The impact of almost 200 reform measures of the administration has resulted in a cumulative saving of almost €31 million for public administrations and just over EUR 4 million for citizens and businesses.
- **September 2016:** the new versions of the Electronic Signature Portal and the Cl@ve Informative Portal with responsive design were published[185]. This change improves the accessibility of the portals, positioning (SEO) and allows access to information tailored to different devices in a more convenient and simple manner.

3.26.3 *Country Specific Recommendations*

The CSR issued by the European Commission for Spain makes no specific mention of the need to intervene in the eGovernment and interoperability fields.

[182] http://www.boe.es/diario_boe/txt.php?id=BOE-A-2016-10146
[183] https://www.boe.es/buscar/act.php?id=BOE-A-2015-10565&p=20151002&tn=2
[184] Refer to footnote 181.
[185] http://clave.gob.es/clave_Home/clave.html

3.26.4 *National Reform Programme*

The following links to TO2 and TO11 highlight the main priorities and planned measures in the eGovernment and interoperability domains identified in Spain's NRP[186].

Thematic Objective 2:

- **Introduction of Digital Rights of Citizens:** Spain has already formed a panel of experts to shape the regulatory reforms that accompany the process of digital transformation of society, in particular as far as the so called 'digital rights of citizens' (among the others, guarantee to privacy, right to oblivion, access to information) are concerned.
- **Creation and consolidation of Digital Transformation Offices:** to support the digital transformation of enterprises, with a special focus on SMEs, Spain is encouraging the creation and consolidation of Digital Transformation Offices, which will be based in already existing technological centres, universities and local institutions and will be offering IT solutions and services (Cloud Computing, Big Data & Analytics, Cybersecurity and Mobility).
- **Launch of the Digital Agenda for Infrastructure and Transport:** in order to reap the benefit deriving from ICT, Spain aims to strengthen the use of ICT applications within the transport sector to allow intelligent traffic management.
- **Creation of a VAT Information Immediate Delivery (SII) System:** the SII System allows for electronic delivery of billing records to companies. This new tool should both benefit taxpayers and improve the efficiency and effectiveness of tax control.
- **Improvement of Digital Connectivity:** with the aim of removing the digital divide and extend high capacity networks, Spain is planning to promote the development of 4th and 5th generation mobile networks, establish a Broadband Extension Plan and continue the regulatory reform of Law 9/2014, General Telecommunications.
- **Development of Intelligent Territories and Public Services 4.0:** Spain aims to maintain its leadership in the field of Smart Cities, enlarging its scope to create 'Intelligent Territories'. The main challenges addressed by 'Intelligent Territories' relate to rural areas and the provision of the so called Public Services 4.0.

Thematic Objective 11:

- **Digital transformation of the Public Administration:** as part of the strategic Plan for the Transformation of the Public Administration for the period 2017-2020, Spain is carrying out several measures (among others: digital Civil Register, telematics communication with notaries, Digital Justice) aimed at improving its efficiency, through the digitisation of the Administration, ensuring citizen proximity, transparency, accountability, thanks to its Open Government strategy, and finally modernising public employment.

[186] Spain 2017 NRP, available at: https://ec.europa.eu/info/sites/info/files/2017-european-semester-national-reform-programme-spain-es.pdf

3.26.5 *Operational Programmes*

For the funding period 2014-2016, Spain adopted two national OPs specifically dealing with the themes related to TO2, OP for 'Smart Growth' and OP for 'Sustainable Growth'. These programmes contain funding priorities and planned reforms that link to the themes addressed in this study. Spain's OPs, in particular, focus on widening the territorial reach of its public services through digital solutions.

The following section will highlight the main project areas linking to TO2.

Thematic Objective 2:

- **Enhancement of territorial coverage of National Health Service through eHealth:** special emphasis is accorded by the OP 'Smart Growth[187]' in the field of health. EDRF funds are being channelled into the digitisation of medical records and prescriptions in the National Health Service and making these services available on a national level.
- **Application of new technologies for better public services:** in view of Spain's positive experience with the smart cities' initiative, the OP 'Sustainable Growth'[188] wants to extend some of the lessons learnt to the rest of the country by applying sensor networks, installing management platforms and improved communication networks that enhance the provision of digital public services offered by small municipalities.

[187] http://www.dgfc.sepg.minhap.gob.es/sitios/dgfc/es-ES/ipr/fcp1420/p/Prog_Op_Plurirregionales/Documents/PO_Crec_Int._Dec_Anex1_Anex2.pdf
[188] http://www.rediniciativasurbanas.es/NR/rdonlyres/FE1BCB47-290F-401F-8AD5-C09E304710D3/136506/PO_Cre_Sost_Dec1.pdf

3.27 Sweden

3.27.1 *Socio-economic Outlook*

Sweden is currently experiencing macroeconomic imbalances and is in the preventive arm of the Stability and Growth Pact. The Government plans to continue to meet the medium-term budgetary objective of a structural deficit of 1% of GDP throughout the programme period. Additionally, the debt-to-GDP ratio is expected to fall to 42.5% in 2016 and to continue declining to 39.1% in 2009 according to the Convergence Programme. Overall, according to the Council, Sweden is expected to comply with the provisions of the Stability and Growth Pact.

Economic Outlook

Household debt levels in Sweden are slowly spiralling out of control. In order to relieve this, Sweden should adjust fiscal incentives through gradual limitation of the tax deductibility of mortgage interest payments and increases in recurrent property taxes.

Housing Market

Amongst OECD member countries, Sweden has experienced the sharpest decline in the educational performance of 15-years-olds and is currently performing below both EU and OECD averages. These deteriorating educational outcomes are putting Sweden's competitiveness and innovating capacity in a risky position in the long run. There is also a significant performance gap between students with and without migrant background stemming from challenges to integrate a large number of young migrants arriving to the country.

Education

A high increase in the influx of refugees in the past years is expected to put an additional strain on public administration, labour markets and education system. The short-term impact of the sudden influx, however, is positive on the Swedish economy; it will lead to an increase in public expenditure, increased demand and higher GDP.

Refugee Impact

3.27.2 *Country eGovernment and Interoperability outlook*

Sweden maintained a stable position (8th) in the DESI Report for the provision of Digital Public Services, confirming itself above the EU average. The country shows a significant improvement (+50%) when considering the 'eGovernment Users' dimension. However, Sweden lags behind in its 'Open Data' strategy.

The following are some of the eGovernment and interoperability highlights having occurred in Sweden since 2016:

- **November 2016**: the meeting platform 'Share Digital' (Swedish *'Dela digital'*) was launched[189]. Through the platform, 290 municipalities, 21 county councils/regions and over 300 government agencies can work together to implement joint initiatives and share results and experiences from their own business development experiences. The aim of the site is to share information and to improve conditions for interaction among different stakeholders. Using

[189] http://www.deladigitalt.se/#loggain

'Share Digital', the public sector can increase the quality and efficiency of operations by reusing work already done and can also more easily find contacts and exchange experiences.

- **September 2016**: the government's budget for 2017 will be used to implement long-term financing of national digital services and national digital basic data. In 2017, the Government proposes a total of SEK 104 million to be invested, rising to SEK 143 million annually from 2018. The national digital infrastructure is a prerequisite for the digitisation of the public sector in Sweden. An essential part of this work is the introduction and further development of national digital services, for example, the platform for single point communication channel between authorities and citizens, called 'My Messages' (Swedish '*Mina meddelanden*'[190]), eID and eCommerce.
- **August 2016:** the government commissioned the Swedish Agency for Innovation Systems (Vinnova)[191] to undertake further efforts to take advantage of digitisation opportunities for better health and health care from 2016 to 2017. The assignment will be carried out in collaboration with the Government's life science coordinator and reference group for life science and, in designated parts, the Swedish eHealth Authority.

3.27.3 *Country Specific Recommendations*

The CSR issued by the European Commission for Sweden makes no specific mention of the need to intervene in the eGovernment and interoperability fields.

3.27.4 *National Reform Programme*

The following link to TO2 highlights the main priority in the eGovernment and interoperability domains identified in Sweden's NRP[192].

Thematic Objective 2:

- **Digitisation of services in the Region of Värmland**: the Academy for Smart Specialisation was established as part of the implementation of Region Värmland's research and innovation strategy. The academy will help to implement the priorities of the strategy, including the 'digitisation of the welfare services' is one the six potential areas identified in the Värmland's research and innovation strategy and introduction of them, along with the digitalised experience of nature, culture and place.

3.27.5 *Operational Programmes*

A thorough evaluation of Sweden's OPs for the 2014-2020 financing period has revealed that the are no initiatives planned under TO2 and TO11 that would fall under the scope of this study.

[190] http://www.minameddelanden.se/
[191] http://www.government.se/government-agencies/swedish-agency-for-innovation-systems/
[192] Sweden 2017 NRP, available at: https://ec.europa.eu/info/sites/info/files/2017-european-semester-national-reform-programme-sweden-en_1.pdf

3.28 United Kingdom

3.28.1 *Socio-economic Outlook*

Economic Outlook

The United Kingdom is currently in the corrective arm of the Stability and Growth Pact and will be continued to be subject to the preventative arm as well as the transitional debt rule in 2017-2018. The government expects the headline deficit to be below 3% in 2016-2017 and to fall by a further 1% in 2017-2018. According to the Convergence Programme, the government debt-to-GDP ratio is expected to fall from 88.9% in 2015-2016 to 88.3% of GDP in 2016-2017. Given the fact that the measures to support the planned deficit targets in 2016-2017 are sufficiently specified, the macroeconomic scenario underpinning this objective is plausible.

Housing Market

The UK continues to suffer from insufficient supply of housing, especially in geographical areas of high economic growth. Despite the government's various initiatives, housing demand continues to outstrip supply and this is reflected in high and continuously rising house prices. The housing crisis is mostly keenly felt in the rapidly growing regions of London and South-East.

Productivity Issues

Since the economic crisis, productivity has stagnated in the UK due to low capital investment, skills shortages, skills mismatches and a shift in the composition of the economy towards business sectors with lower productivity. In 2015, the government published a policy document 'Fixing the foundations: creating a prosperous nation', which lays out numerous responses to the issue. The solutions proposed in the document are timely, however effective implementation at all levels is key to its success. One of the main investment challenges is to deliver adequate network infrastructure. The government hopes to achieve this, through its 'National Infrastructure plan', by increasing private financing for much of these investments.

3.28.2 *Country eGovernment and interoperability Outlook*

As far as the provision of Public Digital Services is concerned, the United Kingdom ranks 18th, which is three ranks lower compared to previous year's report. Despite that, the country is advanced in terms of 'Open Data', for which it ranks 6th in the EU, and the use of eGovernment services is slightly over the EU average. Weaknesses can be found when considering the 'Pre-filled Forms' and 'Online Service Completion' DESI dimensions.

The following are some of the eGovernment and interoperability highlights having occurred in the United Kingdom since 2016:

- **February 2017**: the UK government launched a new Government Transformation Strategy[193]. The government strategy aims at strengthening the UK's digital capabilities and building upon the successes of the 2012 Government Digital Strategy[194].

[193] https://www.gov.uk/government/publications/government-transformation-strategy-2017-to-2020
[194] https://www.gov.uk/government/publications/government-digital-strategy

- **November 2016:** the United Kingdom launched its updated National Cybersecurity Strategy[195], as part of its strategy to strengthen the security infrastructure in new policies and capabilities, through the investment of £1.9 billion.
- **May 2016:** the GOV.UK Verify tool was launched[196]. GOV.UK Verify will act as the central government's official verification tool, helping to authenticate citizens' identities and provide a simple and standardised way for people using online government services to complete transactions. This aims to improve the current customer experience. To date, more than 950,000 individual personal account have been verified through this facility. Services covered by GOV.UK[197] include vehicle licensing and income tax, state pensions, partial roll out of welfare payments and rural payments (agriculture), self-assessment tax returns.
- **February 2016**: GOV.UK Pay, was introduced as a new product to allow users to use a single form of payment, regardless of what government service they are using[198]. The platform aims to make it simpler and easier to execute online payments in comparison to the other online payment methods available online and make it possible for the user to receive refunds more quickly. GOV.UK Pay is being built by the Government Digital Service (GDS), working with government departments and payment service providers. It aims to making the payment of government services simpler, easier and faster for users.

3.28.3 *Country Specific Recommendations*

The CSR issued by the European Commission for the United Kingdom makes no specific mention of the need to intervene in the eGovernment and interoperability fields.

3.28.4 *National Reform Programme*

The following link to TO2 highlights the main priority and planned measures in the eGovernment and interoperability domains identified in the UK's NRP[199].

Thematic Objective 2:

- **Increase in the access to broadband and 4G networks**: the UK aims to become a world leader in the next wave of mobile technology and services. In order to achieve this goal, the government is investing to support the creation of fast and reliable mobile and broadband networks for both citizens and businesses, while at the same time financing local projects to find ways to facilitate the market delivery of full-fibre broadband networks. A new Digital Infrastructure Investment Fund will also be established.

[195] https://www.gov.uk/government/publications/national-cyber-security-strategy-2016-to-2021
[196] https://www.gov.uk/government/publications/introducing-govuk-verify/introducing-govuk-verify
[197] https://www.gov.uk/
[198] https://www.payments.service.gov.uk/
[199] UK 2017 NRP, available at: https://ec.europa.eu/info/sites/info/files/2017-european-semester-national-reform-programme-united-kingdom-en.pdf

3.28.5 *Operational Programmes*

A thorough evaluation of the UK's OPs for the 2014-2020 financing period has revealed that there are no initiatives planned under TO2 and TO11 that would fall under the scope of this study.

4. Measures and priorities tackling ICT for the modernisation of public administration

4.1 Country Summaries Analysis

The detailed analysis carried out in this study revealed the most recurring themes relating to the macroeconomic outlook of the surveyed countries. Table 2 below offers a clear overview of the main macroeconomic challenges currently faced by the surveyed countries, along with their frequency of their occurrence within the individual Country Specific Recommendations (CSRs). These challenges pertain to different domains and include: high economic and administrative barriers, imbalanced healthcare provision, an ineffective or complex fiscal framework, inefficiencies in the labour market, an inefficient justice system, a lack of transparency and efficiency in public procurement, low administrative capacity and strains on the welfare state.

Table 2 The main economic themes identified in 2017 CSRs

Themes	Countries																									
Economic outlook	AT	BE	BG	HR	CY	CZ	DK	EE	FI	FR	DE	HU	IE	IT	LV	LT	LU	MT	NL	PL	PT	RO	SK	SI	ES	SE	UK
High Economic and Aministrative Barriers	■	■		■		■				■	■	■	(2)	■	■			■	(2)	■	■		■	■		(2)	■
Imbalanced healthcare provision		■			■				■						■	■				■	■	■	■	■			
Ineffective or complex fiscal framework	■	(2)	■	■				■		(2)	(2)	■		■		■	■					■			■		
Inefficiencies in the labour market			■	■	■	■	■	■	■	■	■	■			■	■				■	■			■	■		■
Inefficient justice system			■	■	■									■	■												
Lack of efficiency in public procurement			■			■						■													■		
Low administrative capacity											■			■							■	■	■				
Strains on the welfare state	■			■					■			■				■	■	■	■								

Source: in-depth analysis of the eGovernment factsheets 2017 and the study on Background Information on Digital Agendas / Strategies of Member States, performed by Wavestone

These domains present challenges, which initiatives related to eGovernment and interoperability could address under the scope of TO2 and TO11 to help Member States as explained below.

- **High economic and administrative barriers:** 20 of the 28 surveyed countries retain high economic and administrative barriers, which adversely impact the investment climate for the private sector. The lack of investments is compounded by the regulatory barriers for businesses, which, in many cases, hamper the ability of new businesses, in particular SMEs, to register and establish themselves, thus hampering the vibrancy of business environments.
- **Imbalanced healthcare provision:** the improvement of the healthcare system emerges as one of the top concerns for many countries. The key issues to be tackled are the complex access to healthcare for the citizens and its increasing costs. In this regard, eHealth measures are believed to offer a concrete solution to reduce both inefficiencies and costs. This is notably the case of Lithuania, which exhibits the poorest healthcare outcomes within the EU.

- **Ineffective or complex fiscal framework:** among the many downsides of an ineffective or complex fiscal framework, the most significant one for the surveyed countries appears to be the inefficient tax system, which, in some cases, translated into poor tax compliance and tax evasion. eTax measures could help Member States to collect tax revenues and indirectly enhance the quality of the services provided by the Public Administration. In the long-run, this could lead to an improvement of the fiscal position of countries such as Bulgaria, Czech Republic, Italy and Lithuania.
- **Inefficiencies in the labour market:** more than half of the surveyed countries currently experience labour market inefficiencies. These relate to high unemployment rates and, in the worst cases, persistent unemployment, as well as labour market mismatches and structural rigidities. Although a direct application of eGovernment and interoperability solutions might not improve such situations, the use of ICT tools can be a valid instrument to reinforce the provision of employment services and help to match the supply and demand on the labour market.
- **Inefficient justice system:** with respect to the previous year, the inefficiencies of the justice systems of some countries emerged as a more prominent challenge. In order to address issues related to the lack of transparency within the judiciary, as well as inefficiencies in the judicial process leading to long and burdensome proceedings, Member States are increasingly adopting eJustice solutions. These should help countries like Italy to create a more transparent and efficient judicial system.
- **Lack of efficiency in public procurement:** lack of efficiency and transparency in public procurement processes emerges as one of the main causes of corruption in many Member States, leading in turn to a hampered competition within the market. In this regard, eProcurement measures could allow for an easier detection of irregularities, thus ensuring a fairer competition in countries like Czech Republic and Hungary.
- **Low administrative capacity:** in many Member States, public administrations are characterised by complex, unclear organisational structures unable to coordinate among themselves. This is very often conducive to corruption and dramatically affects the quality of the provision of public services. Member States should take advantage of eGovernment and interoperability solutions to combat these issues to support a more open and efficient public sector.
- **Strains on the welfare state:** this year more and more countries were facing challenges in their social security and services' provision. One of the most recurring issues concerns the pension system. In this case, the use of eGovernment and interoperability solutions can help countries like Italy to better manage the system through, for instance, the creation of digital pension registries and dedicated portals.

It is noteworthy to observe that Denmark is both the country with the lowest macroeconomic imbalances according to Table 2 above and the country with the best score as far as eGovernment and interoperability are concern according to the DESI statistics.

4.2 Country eGovernment and Interoperability Outlook

The section provides a factual summary of the most recent developments regarding eGovernment and interoperability for 28 Member States covered by that scope in the study. In order to come up with the categorisation of Member States reform priorities linked to TO2 and TO11 the Background Information on Digital Agendas and Strategies of Member States study[200] and the State of Play on Interoperability Report of 2016[201] were consulted.

4.2.1 *eGovernment outlook*

An analysis of the eGovernment performance using the DESI indicator on digital public services revealed a mixed picture in terms of the development and evolution of eGovernment in different Member States. Overall, most Member States recorded an improvement in terms of performance and achieving a higher overall score in digital public services from 2016. Where there is a difference, however, is in the overall ranking. Whilst some Member States saw a drop in their ranking, such as Belgium, UK, Lithuania, and Portugal, both Slovakia and Luxembourg increased their overall ranking by two positions. There is also a group of countries progressing very slowly, such as Romania, Bulgaria, Italy and Greece, which did not exhibit any change in their ranking this year and remain at the bottom of the list.

The analysis of the abovementioned documents, together with the taxonomy that was developed to analyse the eGovernment and interoperability developments in the OPs and NRPs, permitted the proposal of the following categories to classify the most recent eGovernment developments in the analysed countries:

- **Enhancing or establishing eGovernment framework** – the framework helps to improve and strengthen the collaboration and interaction between different public bodies in delivering eGovernment initiatives**.** For example, this year Lithuania approved the new Implementation Plan of the Government Administration, which lays downs specific plans and milestones to modernise the public administration.
- **Introducing or strengthening eID functionalities** – measures related to the introduction of new forms of authentication, the introduction of a new security framework or the update to an existing one fall under this category. In the case of Italy, a new eCard for teachers in public education was introduced, allowing them to access their professional allowance. Lithuanian government successfully registered and launched the national identification system, NETAIS.
- **ICT capacity building** – measures related to increasing the uptake of digital public services and developing the digital skills of public sector practitioners. For example, the government of Belgium organised a hackathon with citizens to identify innovative ways to reuse open government data.

[200] Official Deliverable D05.02 Background Information on Digital Agendas / Strategies of Member States published under Specific Contract No 291 of Framework Contract No DI/07172.
[201] https://ec.europa.eu/isa2/sites/isa/files/docs/publications/report_2016_rev9_single_pages.pdf

- **Widening eGovernment services provision** – developments related to new digital public services were assessed in this category, such as the launch of the Blood Donors mobile app in Malta.
- **Introduction of new technologies** – developments involving the application of new technologies such cloud computing fall under this category. This was the case for Estonia, which is pursuing the deployment of the government cloud.

An analysis of the eGovernment developments in Member States, reveals that these developments are underpinned by core principles guiding most eGovernment reforms, such as Openness and Transparency (i.e. relaunch of the Open Data Portal in Italy); Security and Privacy (i.e. development of the Cyber Security Framework in Slovakia); User-centricity[202], which plays an important role in the UK's Government Transformation Strategy. Table 3 below summarises the main eGovernment development types Member States exhibited.

Table 3 Identified eGovernment developments

Themes	Countries																												
eGovernment Outlook	AT	BE	BG	HR	CY	CZ	DK	EE	FI	FR	DE	EL	HU	IE	IT	LV	LT	LU	MT	NL	PL	PT	RO	SK	SI	ES	SE	UK
Widening eGovernment services provision									(2)	(4)	(2)		(2)								(2)						(2)	
eGovernment Framework						(2)				(2)														(2)				(2)
eID																												
Introduction of New Technologies																												
ICT capacity building																												

Source: in-depth analysis of the eGovernment factsheets 2017 and the study on Background Information on Digital Agendas / Strategies of Member States, performed by Wavestone.
Note: the study 'Background Information on Digital Agendas and Strategies of Member States' covers only 9 countries, but its analytical framework was used for the mapping of all 28 countries in this study.

4.2.2 *Interoperability outlook*

Using the taxonomies developed for the analysis of the NRPs and OPs, it is possible to map the most recent developments in interoperability in Member States that are highlighted in their eGovernment and NIFO factsheets 2017. The list below presents the main interoperability priorities of the EU Member States in 2017.

- **Simplified delivery of services** – measures improving the interoperability and enhancing the quality and efficiency of service delivery within public administrations and also to citizens and businesses were identified in Austria, Denmark and others.
- **Efficiency through ICT** – measures focused on harnessing of ICT to improve process efficiency within the public administration. Luxembourg, for example, created an official electronic journal collating all of the legal norms of the Luxembourg Government. Legal norms no longer need to be published in paper form as it is now enough to publish them online through the journal. In the meantime, Estonia has launched a sixth version of its X-Road platform[203]. X-Road connects different public sector's databases and underpins the implementation of e-Estonia.

[202] KS.SC291.D05 01. Background Information on Digital Agendas-Strategies of Member States
[203] https://e-estonia.com/solutions/interoperability-services/x-road

- **eGovernment portals** – development of portals, which can be accessed by citizens and businesses for data supply and exchange. In Spain, the Electronic Signature Portal and the Cl@ve Informative Portal now enable better user experience and have better portability with different electronic devices. In Slovenia, a new portal *zVEM* (One-Stop Shop for eHealth) was introduced, allowing registered users to review electronically prescribed and dispensed medication, information on waiting times and electronically issued referrals.
- **Interoperability framework** – adoption of the update of the national interoperability framework, which was done in Belgium, Cyprus, France, amongst other countries.
- **Open Data** – measures include committing to opening up of government data, creation of open data portals ensuring easy access and reuse of open data, and standardising the publication of open data. Slovenia is one of the Member States which introduces a national Open Data Portal last year. Furthermore, in efforts to enhance cross border administrative cooperation, Finland and Estonia signed a joint declaration, committing to making the data on their respective databases available and interchangeable for citizens and business across the two countries, ensuring cross-border services across the Gulf of Finland.
- **ICT Infrastructure** – measures including the adoption of ICT infrastructure for enhancing government efficiency, ensuring better service delivery and achieving interoperability. Latvia is planning to create a Public administration information and communication technology Architecture Management System' (PIKTAPS), which would enhance the use of ICT solutions within government.
- **Public registries** – development and storing of standardised data in public registries is one of the key enablers of interoperability. Czech Republic, for example, introduced a Contract Register, which now promotes transparency in public funds management by providing a platform for the publication of contracts.

Table 4 below summarises the main interoperability developments Member States exhibited.

Table 4 Identified interoperability developments

Themes	Countries																											
Interoperability Outlook	AT	BE	BG	HR	CY	CZ	DK	EE	FI	FR	DE	EL	HU	IE	IT	LV	LT	LU	MT	NL	PL	PT	RO	SK	SI	ES	SE	UK
Simplified delivery of services	■				■		■		■	■		■						■	■						(2)			■
Efficiency through ICT			■		■	■				■			■				■	■			■			■		■	■	
eGovernment Portals		■								■					■										■	■	■	
Interoperability Framework		■			■					■													■					
Open Data		■							■						■			■							■			
ICT Infrastructure						■					■					■											■	
Public Registries						■	■		■																			

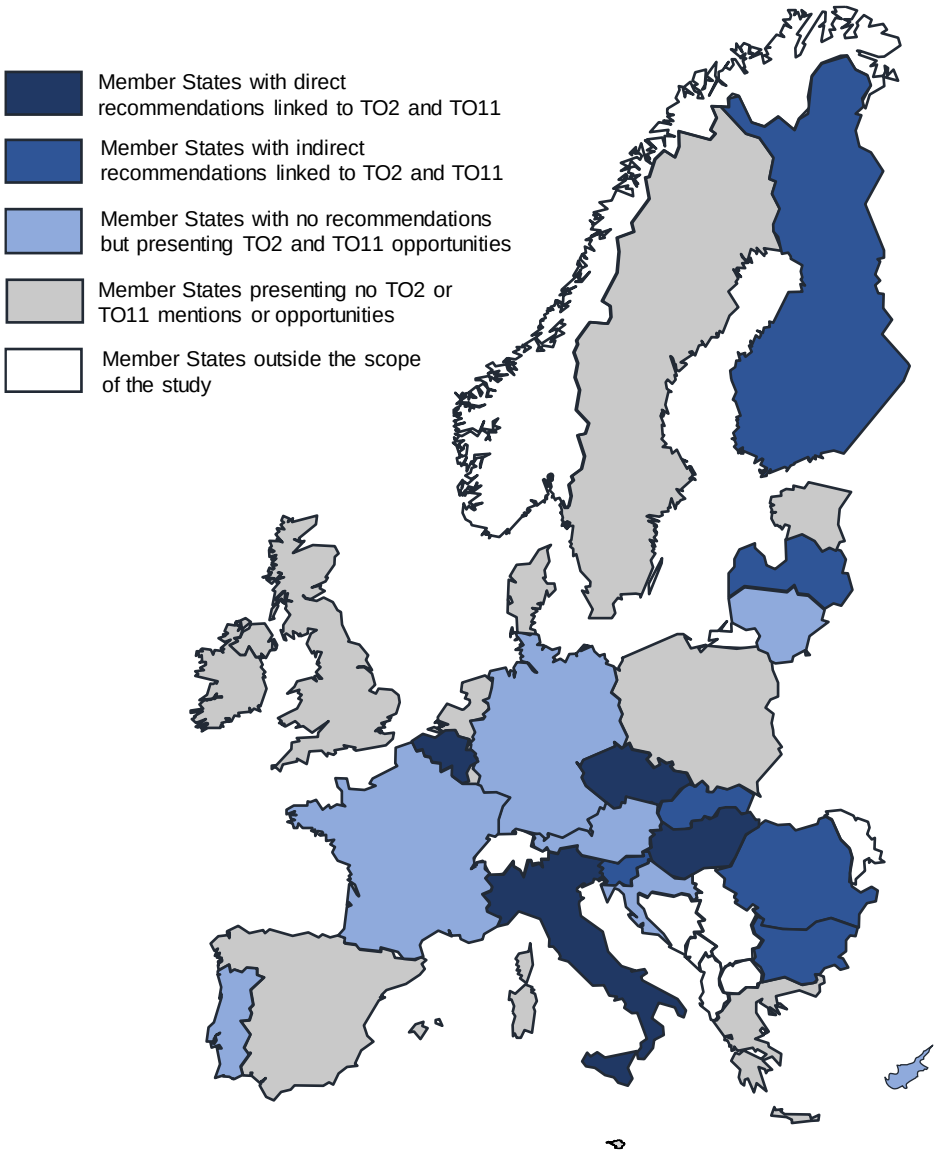
Source: in-depth analysis of the eGovernment and NIFO factsheets 2017, performed by Wavestone.

4.3 Country Specific Recommendations Analysis

The analysis of the Country Specific Recommendations 2017 for the 28 Member States reveals a mixed picture of the links in the CSRs to the TOs related to the modernisation of public administrations, more specifically, TO2 and TO11.

The references to the modernisation of public administration through ICT measures made in the CSR are categorised into direct recommendations, mentioned in recitals, and opportunities where TO2 and TO11 solutions could be applied. As illustrated in Figure 2, the picture across Europe is varied. Whilst the majority of the countries have some links to TO2 and TO11, only four, namely Italy, Belgium, Hungary and the Czech Republic have a recommendation linked to TO2 or TO11.

Figure 2 CSRs referring to modernisation of public administration



Source: in-depth analysis of 2017 CSR documents, performed by Wavestone
Notes: data prepared after carefully surveying the CSRs for countries in the study and identifying key links between CSRs and TO2 and TO11. There was no CSR issued for Greece in 2017.

The CSR documents for Denmark, Luxembourg, Spain, UK, Ireland, Netherlands, Malta, Poland, Estonia and Sweden did not contain any direct or indirect mentions of modernisation of public administration. The picture was similar last year for Spain, UK, Ireland, the Netherlands, Sweden, and Malta. Several countries had numerous types of mentions. In the case of Belgium and Czech Republic, their CSRs contained all three types of mentions, a recommendation, an indirect mention in one of the recitals and a potential opportunity for eGovernment and interoperability intervention. Bulgaria, Latvia and Slovakia all had both a mention in one of the recitals and an identified opportunity for intervention.

In addition to identifying the type of mention in each Member States' CSR, a thematic analysis was also performed. The thematic overview of the 2017 CSR documents reveals key reoccurring themes in the documents, which are summarised in Table 5 and are presented below:

- **eGovernment services:** the CSR documents clearly diagnose that public administration must be modernised, and the application of eGovernment services (without specification) is occasionally prescribed as a solution such to reduce administrative burden on businesses. Such is the direct recommendation to Czech Republic, which states that the country should aim at 'further reducing the administrative burden on businesses, by rolling out key e-government services'.
- **eHealth:** the 2017 CSRs highlighted the fact that improving the efficiency and capacity of the national healthcare systems remains a significant challenge for several European countries. The intervention in the domain of eHealth is mentioned in the recitals of Romania and Slovakia, whereas an opportunity for this can be seen in Austria, Bulgaria, Cyprus, Portugal and Slovenia.
- **eJustice**: the analysis of the CSRs revealed that some Member States suffer from persistently slow and non-transparent judicial processes. Accordingly, the need for eJustice measures is mentioned for Slovenia and is identified as an opportunity for Croatia and Cyprus. However, this theme is less prevalent in the 2017 CSRs than in previous years.
- **eTax:** many Member States currently struggle to consolidate their fiscal framework and report significantly large shadow economies. Significantly, forms of eTax or electronic payment for tax collection are presented as possible solutions in the CSRs. This is recommended directly in the case of Italy for the second year in a row.
- **eProcurement:** the lack of transparent public procurement processes hampers the competitiveness and transparency of many Member States. Consequently, the introduction of eProcurement models is a recurring theme in the CSR documents. It has a specific recommendation in the case of Hungary and an indirect mention in those of Latvia and Bulgaria.
- **Digitisation:** the need for countries to spread digitisation, not just in the public sector but in other domains as well, is a new mention in the CSRs this year. For example, in Finland's CSR, digitisation is proposed as a solution to reduce public expenditure in social care. Similarly, Belgium's CSR makes a direct recommendation to its federal government to foster 'digital technologies adoption, and innovation diffusion' in the country in order to increase its competitiveness.

- **Administrative Simplification:** ICT measures can significantly enhance the capacity and efficiency of the public sector. In the case of Latvia, the CSR recommends that the country improve its public sector efficiency, 'notably by simplifying administrative procedures and strengthening the conflict of interest prevention regime, including for insolvency administrators'. This presents an opportunity for intervention through ICT.

Table 5 Thematic breakdown of modernisation of public administration mentions in CSRs

Themes	Countries																	
eGovernment Developments	AT	BE	BG	CY	HR	CZ	FI	FR	DE	HU	IT	LV	LT	PT	RO	SK	SI	Sum
eHealth																		7
eProcurement																		5
eGovernment services						(2)												5
eTax																		5
eJustice																		4
Digitisation		(2)																3
Administrative Simplification																		1

Source: in-depth analysis of 2017 CSR documents, performed by Wavestone.
Note: There was no CSR issued for Greece in 2017.

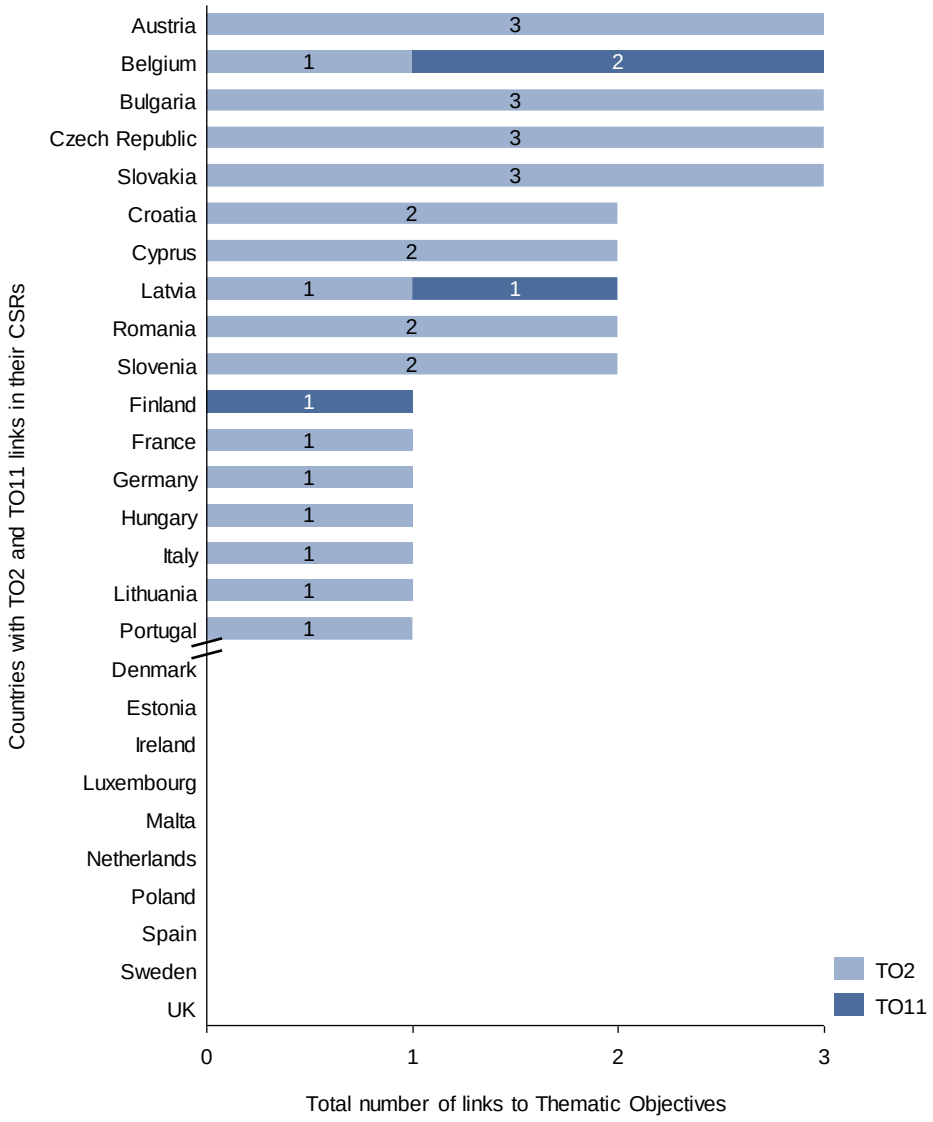
TO2
TO11

Furthermore, in addition to identifying the main themes relating to eGovernment and interoperability in the 2017 CSRs, an analysis is also performed to identify how many of those mentions are related to the ESIF TO2 and TO11. More specifically:

- TO2's priorities are addressed by most Member States, especially in the areas of eGovernment services, eJustice, eHealth and eTax, and eProcurement.
- TO11 focuses on enhancing the institutional digitisation and simplification of public administration and is reflected in several CSRs.

The themes relating to public administration modernisation identified in the CSRs mainly fall under TO2 with only digitisation and administrative simplification falling under the TO11 domain, as depicted in Figure 3 below.

Figure 3 Member State CSRs with links to TO2 and TO11



Source: in-depth analysis of 2017 CSR documents, performed by Wavestone
Note: There was no CSR issued for Greece in 2017.

4.4 National Reform Programmes Analysis

The content analysis of the NRPs of the surveyed countries helped to establish how different reforms, carried out in the Member States, tackle issues related to the use of ICT within the public administration to enhance eGovernment services and interoperability in the public sector.

The following summary provides an additional tool to answer the RQ1 of the study (**'How do the Country Specific Recommendations, National Reform Programmes and Operational Programmes tackle Information Communication Technology (ICT) for the modernisation of public administration?'**) since it offers a comprehensive overview of the main planned initiatives and measures linked to European Structural and Investment Funds investment priorities TO2 and TO11.

Overall, the analysis of the national reforms listed in the countries' NRPs reveals a nuanced picture with regard to eGovernment and interoperability and the related thematic areas. This study categorises the national reforms into two thematic areas: generic or cross-cutting themes (e.g. eID) and sector-specific themes (e.g. eHealth).

The following provides a list of the main eGovernment and interoperability themes present in the 2017 NRPs. Table 6 presents the links between key reform themes, specifying whether they are cross-cutting or specific to any one particular sector.

Cross-cutting themes:

- **Cybersecurity**: concerns about the protection of user data and cyber-attacks to governmental portals have greatly increased in recent years, as access to digital sensible data turned into a key weapon in today's world. This led countries to enhance their cybersecurity systems, with countries like Malta adopting a Cyber Security Strategy this year, to effectively protect citizens' data to increase their confidence in using digital public services.
- **Digital literacy**: in order to take full advantage of ICT, some countries are trying to improve the level of digital literacy not only of the citizens, but particularly of the civil servants working within the public administration, as is the case in Italy. This should in turn improve the quality of the provision of digital services to the public.
- **Efficiency through ICT**: in an effort to simplify and increase the efficiency and effectiveness of the public administration, many of the surveyed countries are laying the foundations for a more wide-spread use of digital tools within the public sector. Digital tools are expected to lessen administrative burdens and simplify procedures, reduce the usage of paper, improve the provision of public services, while encouraging online interaction among citizens, businesses and the public administration.
- **eGovernment and interoperability framework**: interaction between citizens and businesses and public administrations or between public administrations themselves requires common guidelines to deliver effective digital services. This is notably the case for Romania's framework for new eGovernment solutions.
- **eGovernment portal for citizens**: eGovernment portals for citizens are one of the most common tools through which public administrations try to reach out to citizens, providing

information and services in different fields. For instance, Hungary's eGovernment portal aims to increasing efficiency by having faster and simplified processes.

- **eGovernment portal for business**: in line with the introduction of eGovernment portals for citizens, more and more countries are creating eGovernment portals dedicated to businesses, in an effort to improve the digital interaction between the public administration and the private sector. This is the case of countries like Latvia, Croatia and Slovakia.
- **eID**: electronic identification is introduced to enable citizens to make full use of digital public services, by storing citizens' data in central systems and making it readily available to trusted government websites. The introduction of eID is one of the most common eGovernment and interoperability measures, with countries like Czech Republic adapting their legislation to comply with eIDAS Regulation[204].
- **Enhancing interoperability across public administrations**: numerous Member States aim to enhance their IT systems and standardise data reporting practices in order to improve interoperability across national and local administrations. Estonia lays down initiatives in its NRPs in relation to this.
- **eProcurement**: eProcurement stands out as one of the main improvement areas for many countries like Latvia, Romania and Hungary. The digitisation of public procurement is often considered as a key measure to enhance transparency and tackle corruption.
- **eRights**: in light of the ongoing process of digital transformation of the society, Member States are trying to regulate previously unregulated fields, like the one of the so called digital rights of citizens. In this regard Spain aims to guarantee its citizens their right to privacy, right to be forgotten and access to information, among others.
- **ICT enabled capacity building**: in order to always provide citizens with better services, public administrations should constantly improve themselves and their capacity building. This can be done through ICT means, which offer effective solutions to very different types of problems within the public sector. Examples are Hungary's enhancement of its ICT capacity within the eAdministration framework and Bulgaria's development of a central civil servant recruitment platform.
- **ICT infrastructure**: the introduction or expansion of eGovernment and interoperability services and functionalities requires the installation of the necessary ICT infrastructure to support it. Among the measures aimed to enhance the Member States' ICT infrastructure, increasing access to broadband and 4G networks is one of the most common actions that arose in the NRPs.
- **New technologies**: in order to enhance their current offering of digital public services, Member States are investing in new technologies. From the analysis of the countries' NRPs, could computing, Big Data and innovative information systems are the most common types of new technologies that will be implemented.

[204] http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32014R0910&from=en

- **Open Data**: Member States are increasingly focusing on the theme of Open Data, one of the dimensions of the DESI index. In this regard, they are trying to make as much information as possible freely available to citizens, who can reuse these data subsequently without any restriction or controls. Countries like France, Germany, Bulgaria and Estonia make specific reference to the need of promoting the reuse of Open Data in their NRPs.
- **Public registries**: the adoption or introduction of digital public registries aims to improve the provision of public services in different domains, by collecting data in one place and make it readily available across different administrations. Examples of digital public services are Croatia's Business Registry, Romania's Registry for Unemployed Youth and Poland's Central Register of Restructuring and Bankruptcy.
- **Raising awareness**: awareness-raising campaigns are used by Member States to enhance the digital knowledge of their citizens and to promote social inclusion through digital means. Denmark aims to do both through the use of the so-called eInclusion tools.
- **Simplified eService delivery**: the simplification and improvement of eService delivery for both businesses and citizens emerges as one of the main concerns for most of the surveyed countries. Portugal, for instance, launched a single national programme of measures, called SIMPLEX+ programme with the main objective to make life simpler for citizens and businesses in their interaction with public services.
- **One-stop shops**: many countries are trying to offer one-stop shops in which multiple services are offered. This is the case of Romania, which aims to offer digital interoperable one-stop shops in order to improve administrative procedures.

Sector-specific themes:

- **eCulture**: eCulture is a new theme that emerged from the analysis of the countries' NRPs. New technology-based access to culture is expected to change both its production and dissemination, offering people new ways to participate in cultural experiences and learn. One example is Latvia's Digitisation of Cultural Heritage Content, which aims to create a single digital resource register.
- **eHealth**: healthcare stands out as one of the main fields in which the application of ICT tools can greatly benefit both the Member States and the citizens. Examples of eHealth solutions include the development of an integrated Health Information System, the introduction of eReferrals and the digitisation of health services. These measures should help Member States to modernise and rationalise their healthcare systems.
- **eJustice**: the digital modernisation of the judicial system is a recurring theme within the countries' NRPs. So-called eJustice measures aim to make the judicial system faster, more transparent and accessible. This will be possible as a result of the introduction of eServices in the judiciary, the development of eLegislation and the upgrade of IT systems in courts.
- **eTransport**: the field of public transportation offers diverse possibilities for the application of ICT solutions. Member States, for example Finland, increasingly recognise this potential and are examining how they can enhance efficiency and lower costs, while at the same time improve the quality of the services provided through the use of digital tools.

- **eTax**: eTax measures can contribute to the creation of a more modern and uniform taxation system, which would allow for a facilitated and optimised tax collection process and reduced costs for the public administrations, for instance, through the extension of pre-filled tax returns. Indirectly, this could also improve the provision of public services since it could help fight shadow economies and tax evasion.
- **eVoting**: in effort to enhance citizens' engagement in the political sphere, some countries are planning to offer a pilot system for remote electronic voting. This is notably the case of Bulgaria.

One of the key aims of the study is to highlight the link between the ongoing eGovernment and interoperability reforms and the ESIF TO 2 and TO11. More specifically:

- Priorities related to TO2 feature in almost all of the surveyed countries' NRPs (26 out of 28), with the exception of the Netherlands and Austria. These priorities relate mainly to eID, eHealth, simplified eService delivery and new technologies.
- Priorities related to TO11 were less present in the countries' NRPs than those related to TO2. However, the majority of Member States (20 out of 28) did mention measures aimed to enhance the institutional capacity of public authorities and stakeholders in their NRPs. This is particularly true for countries like Romania and Croatia.

Table 6 below presents the main identified themes, along with the related reforms, linked to TO2 and TO11 in the Member States' NRPs. For each theme, Member States' initiatives are summarised. As mentioned above, the themes are clustered into cross-cutting and sector specific themes. It is worth noting that there is no mention of reforms related to either TO2 or TO11 in the Netherlands' NRP.

Table 6 Overview of Member States' initiatives in NRPs

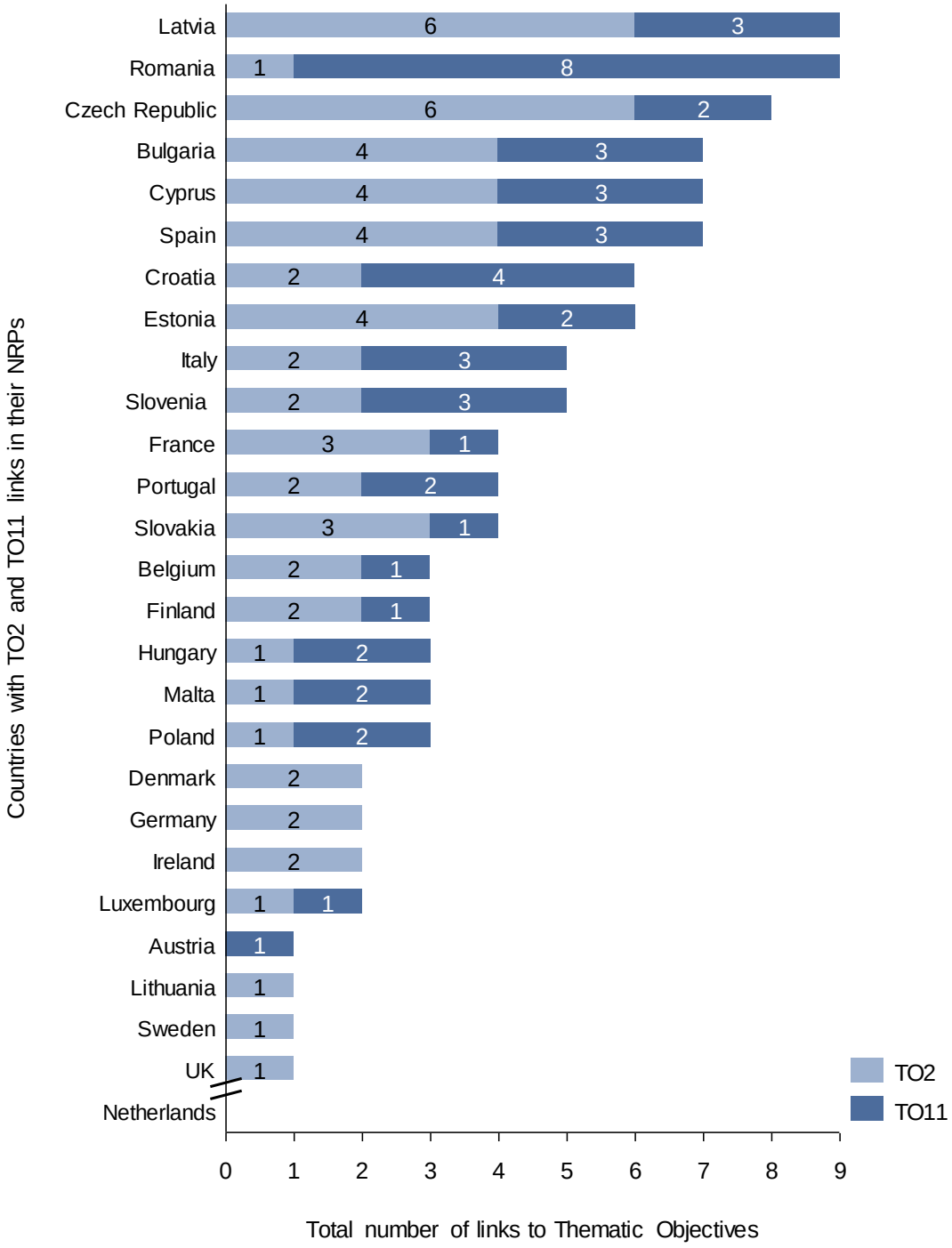
Themes	Countries																											
Cross-cutting themes	AT	BE	BG	HR	CY	CZ	DK	EE	FI	FR	DE	HU	IE	IT	LV	LT	LU	MT	NL	PL	PT	RO	SK	SI	ES	SE	UK	Tot
Simplified eService delivery								(2)		(2)																		15
Efficiency through ICT																												12
Public registries				(2)																		(3)						8
New technologies																												7
eGovernment portal for businesses																												6
eID						(4)																						6
eProcurement																												6
ICT enabled capacity building																												5
ICT infrastructure																												5
Cybersecurity																												4
Open Data																												4
eGovernment and interoperability framework																						(2)						3
Enhancement of interoperability																												1
Digital literacy																												1
eGovernment portal for citizens																												1
eRights																												1
Geospatial portal																												1
Raising awareness																												1
One-stop shops																												1
Sector-specific themes	AT	BE	BG	HR	CY	CZ	DK	EE	FI	FR	DE	HU	IE	IT	LV	LT	LU	MT	NL	PL	PT	RO	SK	SI	ES	SE	UK	Tot
eJustice																												7
eHealth																												6
eTax																												4
eCulture																												1
eTransport																												1
eVoting																												1

TO2
TO11

Source: in depth analysis of the OP 2014-2020 documents performed by Wavestone
Note: Greece did not submit a 2017 NRP.

Figure 4 below presents the breakdown of the number of initiatives falling under either TO2 or TO11 for each Member States. Latvia and Romania are countries with the most initiatives relating to the two TOs, a total of nine each. A total of 60 initiatives identified in the NRPs relate to TO2 and 48 to TO11.

Figure 4 Member States NRPs with links to TO2 and TO11



Source: in depth analysis of the 2017 NRP documents performed by Wavestone.
Note: Greece did not submit a 2017 NRP.

4.5 Operational Programmes Analysis

The main purpose of the content analysis of the OPs is to offer a clear overview of the Member States' reforms to modernise the public administration in the field of eGovernment and interoperability through the use of ICT tools.

The following summary provides additional elements to answer to RQ1 of the study (**'How do the Country Specific Recommendations, National Reform Programmes and Operational Programmes tackle Information Communication Technology (ICT) for the modernisation of public administration?'**), offering a comprehensive overview of the main planned initiatives and measures linked to the European Structural and Investment Funds investment priorities related to TO2 and TO11.

As for the previous section, the analysis of the countries' OPs revealed a mixed picture with regard to eGovernment and interoperability and the related thematic areas. It categorises country measures and reforms into two thematic areas: generic or cross-cutting themes (e.g. eID) and sector-specific themes (e.g. eHealth).

The following list provides the key findings related to eGovernment and interoperability themes derived from the analysis of the countries' OPs. The themes are also summarised in Table 7 which indicates the countries that have initiatives linked to each theme and also under which TOs the theme falls. the theme falls.

Cross-cutting themes:

- **Cybersecurity**: as previously mentioned, cybersecurity is increasingly becoming a major concern for many countries. References to the need to strengthen cybersecurity in the public sector can be found in the OPs of Estonia, France and the Czech Republic.
- **Digital literacy**: the enhancement of digital literacy is a new theme this year. Member States are increasingly recognising the importance of improving the digital abilities of their public servants in order to provide better digital public services to the citizens.
- **Efficiency through ICT**: measures promoting the digitisation of public administration are a recurring theme throughout the countries' OPs and apply in different sectors. Examples are Croatia's introduction of an integrated system for spatial planning and Cyprus' Support Service System for the education sector.
- **eGovernment portal for businesses**: the introduction of an eGovernment portal for businesses is mentioned only once in the surveyed countries' OPs, in that of France.
- **eGovernment portal for citizens**: The creation of an eGovernment portal for citizens is also only mentioned once in the countries' national OPs: Slovakia's portal for all digital public services.
- **eID**: the introduction of electronic identity cards is mentioned just twice in the analysed OPs, in the case of Greece and Bulgaria, as last year.
- **eInvoicing**: eInvoicing is a new theme that emerged from the analysis of the 2017 OPs, as countries like Slovakia are implementing the eInvoicing Directive.
- **Enhancing interoperability across public administrations**: Member States' OPs contain several mentions of the introduction of eGovernment and interoperability frameworks that

would allow for a faster and easier communication and exchange of data both within the national public administrations and between the countries. This is the case of Hungary and Slovakia.

- **eProcurement**: many OPs make reference to the ongoing digitisation of the public procurement process, as in the case of Malta, Bulgaria and Hungary. This would in turn simplify the procedures, allowing bidders to participate without travel and postage costs, thus increasing competition and significantly reducing burden.
- **ICT enabled capacity building**: ICT enabled capacity building in the context of national OPs often makes reference to the introduction of digital tools to enhance the efficiency and effectiveness of the public administration. Examples include France's observatory for the provision of digital public services and Slovenia's monitoring system to fight against corruption.
- **ICT infrastructure**: the provision of eGovernment services requires an adequate ICT infrastructure able to support the services delivered. Many countries, therefore, are continuously improving their ICT infrastructure in order to guarantee quality service delivery. This is notably the case of Malta, Latvia and Estonia.
- **New technologies**: Estonia, Romania and Spain use new technologies to deliver better public services and a well-functioning infrastructure that could support the provision of such services to citizens and businesses. Spain, among others, is eager to also take advantage of new digital tools to widen the access to public services.
- **Open Data**: some countries are increasingly trying to implement intelligent public services through the use of Open Data. This is expected to strengthen transparency and increase the production and publication of public data, as well as facilitate access to a wider public. Specific mention of this can be found in the OPs of Italy and France.
- **Public registries**: some countries promote the introduction of digital public registries in different sectors. In this regard, it is worth mentioning Slovenia's spatial and real estate registry.
- **Raising awareness**: Latvia and Poland make reference in their OPs to the use of digital tools to promote electronic public services among their citizens.
- **Simplified eService delivery**: in order to offer better services to citizens, many countries are committed to simplify the delivery of eServices across different sectors, making them easily accessible and more user-centric. References to this can be found in the OPs of France, Lithuania and Portugal.
- **One-stop shops**: one-stop shops are increasingly used to offer citizens a single window to enjoy eGovernment services in different sectors. This is the case of Malta and Latvia.

Sector-specific:

- **eCulture**: as already mentioned in the previous section, the digitisation process of culture is expected to preserve and promote the cultural heritage through digital means, while also increasing citizens' access to culture. This is mentioned in the OPs of both Croatia and the Czech Republic.

- **eHealth**: eHealth is one of the most recurrent themes within the surveyed countries' OPs. An example of mentioned eHealth measure is France's introduction of remote ICT solutions to monitor the health of inpatients and outpatient.
- **eJustice**: as seen in the NRPs section, many countries are trying to improve their judiciary performance through enhanced ICT infrastructure and eJustice solutions. This is notably the case of Italy, Poland and Slovakia.
- **eTax**: eTax is a less common theme in the countries' OPs compared to their NRPs. eTax measures are citied only once in the case of Lithuania.

Table 7 highlights the diverse types of reforms identified in each country's OPs under the above-mentioned broader theme. Reforms linked to TO2 are highlighted in light blue and reforms linked to TO11 are highlighted in dark blue.

One of the key purposes of the study is to link the countries' ongoing eGovernment and interoperability reforms to TO2 and TO11:

- TO2 priorities are largely addressed by the majority of Member States, especially in the areas of Open Data, New Technologies, ICT Infrastructure and eHealth. OPs for Bulgaria and Malta, in particular, have many links to TO2.
- TO11 priorities are less present in the countries' OPs, as already seen for the NRPs. They focus mainly on enhancing the interoperability across the public administrations and eJustice. Estonia's and Slovakia's OPs show the most numerous links to TO11.

It is also noteworthy to highlight that Austria, Belgium, Denmark, Finland, Germany, Luxembourg, the Netherlands, Sweden and the UK make no references to TO2 or TO11 in their OPs.

Row Labels	Countries																											
Cross-cutting themes	AT	BE	BG	HR	CY	CZ	DK	EE	FI	FR	DE	EL	HU	IE	IT	LV	LT	LU	MT	NL	PL	PT	RO	SK	SL	ES	SE	UK	Tot
Simplified eService delivery																													10
New technologies										(2)																			9
Enhancing interoperability																							(2)						8
Efficiency through ICT				(2)	(2)																								7
ICT enabled capacity building								(2)																	(2)				6
Open Data																													6
eProcurement																													5
ICT infrastructure																													5
Cybersecurity																													3
Digital literacy																													3
eID																													2
Public registries																													2
Raising awareness																													2
One-stop shops																													2
eGovernment portal for businesses																													1
eGovernment portal for citizens																													1
eInvoicing																													1
Sector-specific themes	AT	BE	BG	HR	CY	CZ	DK	EE	FI	FR	DE	EL	HU	IE	IT	LV	LT	LU	MT	NL	PL	PT	RO	SK	SL	ES	SE	UK	Tot
eHealth																													10
eJustice																													8
eCulture																													2
eTax																													1

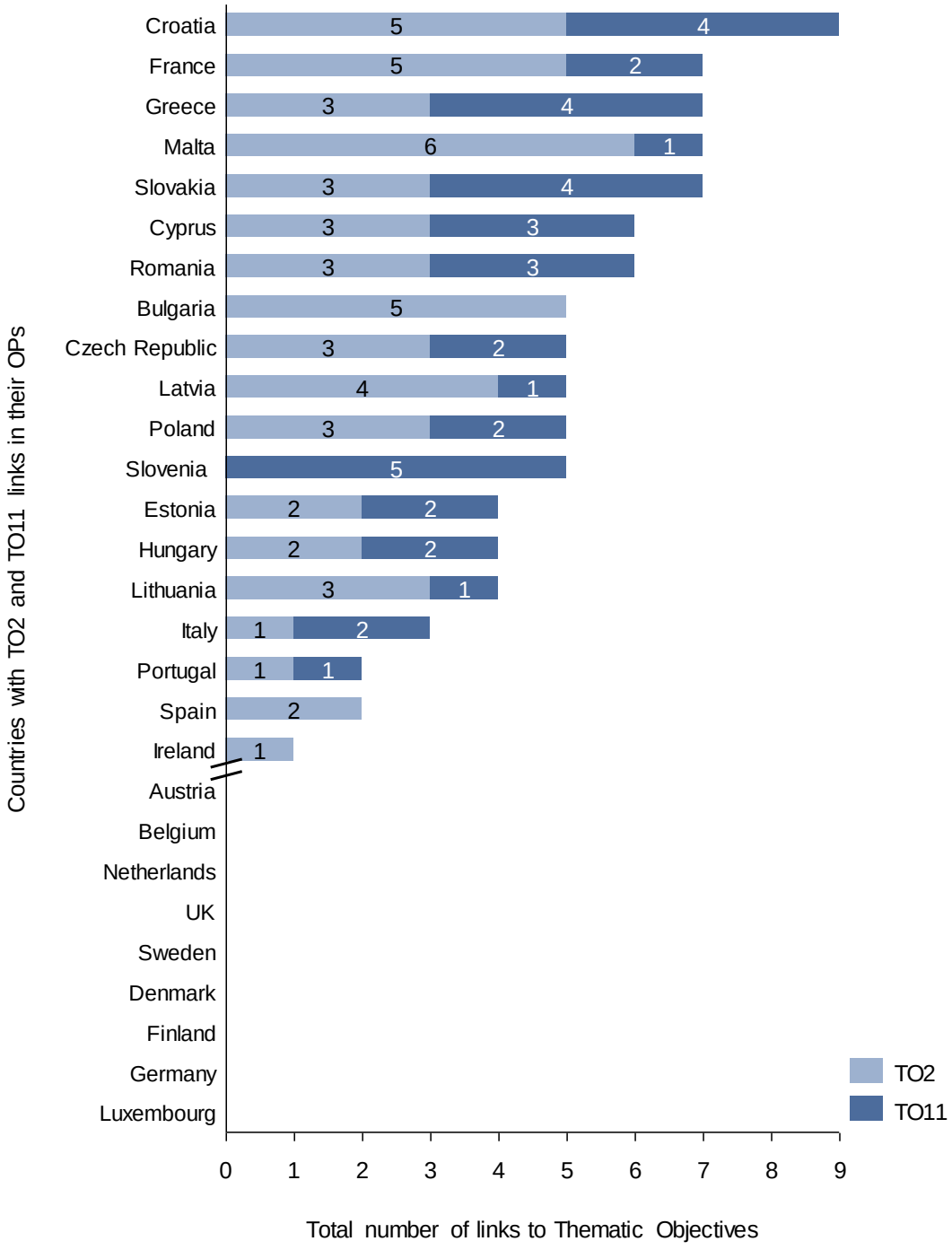
TO2
TO11

Source: in depth analysis of the OP 2014-2020 documents performed by Wavestone.

Table 7 Member States' priorities identified in OPs

Figure 5 below details the number of initiatives related to TO2 and TO11 identified in the OPs of the analysed Member States. Croatia is the Member State with the most links to TO2 and TO11 in its OPs, a total of nine. France, Greece, Malta and Slovakia follow closely behind, with a total of seven each. A total of nine countries had no initiatives linked to the two objectives, namely Austria, Belgium, Denmark, Germany, Finland, Luxembourg, the Netherlands, Sweden, and the UK. There is a total of 55 initiatives with links to TO2 and 39 with links to TO11.

Figure 5 Member States with OPs linked to TO2 and TO11



Source: in depth analysis of the OP 2014-2020 documents performed by Wavestone.

5. Conclusions and Recommendations

For the purpose of the study, an analysis of the European Semester documents, namely the 2017 Country Specific Recommendations (CSRs), the 2017 NRPs, as well as the OPs 2014 – 2020 financed by the European Structural and Investment Funds 2014-2020, covering all 28 EU Member States was performed. Based on the results of the content analysis, the study identifies existing actions of the Interoperability Solutions for European Public Administrations (ISA^2) programme, as well as propose new actions, that can foster the modernisation of public administrations and improve institutional capacity across the EU.

The analysis reveals that only four countries, namely Italy, Belgium, Hungary and Czech Republic have a recommendation linked to TO2 or TO11 in their CSRs, while Spain, the UK, Ireland, the Netherlands, Malta, Poland, Estonia and Sweden do not contain any direct or indirect mentions of the modernisation of public administration. The thematic overview of the 2017 CSR documents identified eHealth as the key reoccurring theme. When analysing the measures relating to TO2 and TO11 in Member States' NRPs and OPs, categorised into two types of thematic categories -cross-cutting themes[205] and sector-specific themes[206] - some analogies have been found. In both documents, priorities related to TO2 are largely mentioned, while priorities addressing TO11 are less present. Moreover, the most recurring theme identified in both NRPs and OPs is the simplification of eService delivery.

The rest of the chapter presents a set of conclusions on how the European Semester documents address the topic of public administration modernisation through ICT, followed by the recommendations addressed primarily to the ISA^2 programme and other Commission initiatives operating in the domain of the modernisation of public administration.

Conclusion Nº1 – CSRs do not address priorities related to TO2 and TO11 extensively. Indeed, a total of 9 Member States' CSRs had no mention of initiatives related to TO2 or TO11. Furthermore, only 4 countries, Italy, Belgium, Czech Republic and Hungary had direct recommendations related to TO2 and TO11. Two of these were related to the need for better eProcurement systems, one to eTax and one to eGovernment services. Hence, mentions of initiatives related to TO2 and TO11 in the CSR documents are rare, despite several Member States underperforming when it comes to eGovernment and interoperability implementation. For example, according to the European Digital Scoreboard, Romania ranks 28th for the provision of digital public services[207], yet receives no specific recommendation related to the modernisation of public administration through ICT in its CSR.

Recommendation Nº1: The study findings highlight that the **Commission DGs working in the area of public sector modernisation, such as DG DIGIT, DG CONNECT, DG GROW, could provide more detailed recommendations on reform priorities linked to TO2 and TO11** for those countries not performing well in the eGovernment and interoperability domains. This could ultimately contribute to the **stronger emphasis of the need for public sector modernisation in the CSRs**.

[205] The cross cutting themes include: Open Data, New technologies, Efficiency through ICT, eProcurement, Simplified service delivery, eGovernment/interoperability framework, Public Registries, eGovernment Portal for business, ICT infrastructure. eID, Cybersecurity, eGovernment Services, eGovernment Portal for citizens, ICT enabled capacity building, eArchiving.
[206] Sector specific themes include: eHealth, eJustice. ECulture, eTax.
[207] Digital Single Market Scorecard for Romania, available at: https://ec.europa.eu/digital-single-market/en/scoreboard/romania

It is important to ensure that public sector modernisation is reflected in the CSRs as they can give impetus to a potential initiative in a concerned Member State for the European Semester period.

An example of a similar initiative is the study[208] currently being conducted for DG CONNECT aiming to develop political guidance for Member States to implement the outcome of the eGovernment benchmarking data analysis and report.

Conclusion Nº2 – Public sector modernisation is a reform priority among Member States, as reflected in their 2017 NRPs and 2014-2020 OPs. Whilst the CSRs do not tackle priorities related to TO2 and TO11 extensively, the analysis of Member States NRPs and OPs reveals a different picture. A total of 118 initiatives related to TO2 and 91 related to TO11 were identified in the 2017 NRPs and OPs of the Member States. This demonstrates that public sector modernisation is seen as a priority when it comes to structural reforms of the Member States.

Recommendation Nº2: Member States should **actively leverage their participation in the ISA^2 programme to obtain support and guidance** on the implementation of eGovernment and interoperability in their country at all administrative levels. This will allow them to further drive the modernisation of their public administrations.

Conclusion Nº3 – The main priorities addressed in the countries' NRPs are the simplification of eService delivery, the enhancement of efficiency through ICT, and the creation of public registries. NRPs showcase the full extent of how individual Member States tackle the topic of modernisation of public administration through the use of ICT tools. They reveal a series of measures undertaken by countries that can be assimilated into key thematic areas either linked to TO2 or TO11.

The most common measures addressed by the Member States in the 2017 NRPs are the simplification of eService delivery, which falls under TO2 and was mentioned 16 times; the enhancement of efficiency through ICT, with 13 mentions and addressing TO11; and finally, the creation of public registries, with 9 mentions and addressing TO11. Among the sector-specific themes, eJustice and eHealth are the most recurring themes, with 8 and 7 mentions respectively.

Conclusion Nº4 – The main priorities addressed in the countries' OPs are the simplification of eService delivery, the development of eHealth and the adoption of new technologies. The 2014-2020 OPs highlighted many initiatives regarding public administration modernisation through ICT tools that Member States are undertaking. The OPs often indicate under which specific Thematic Objective initiatives fall.

The most common measures mentioned in the OPs all fall under TO2 and are the simplification of eService delivery, which was mentioned 10 times and the adoption of new technologies, which was mentioned 9 times. eHealth is the most commonly cited type of initiative in the OPs among the sector-specific measures.

[208] http://ted.europa.eu/udl?uri=TED:NOTICE:115368-2017:TEXT:EN:HTML&src=0

Recommendation Nº3: The ISA² programme should increasingly **target its communications to and with individual Member States** to impress upon them the relevance of its various solutions for the **implementation of the Member States' priorities contained in the NRPs and OPs,** making a link with other existing and future initiatives. In particular, given that simplified eService delivery, adoption of new technologies and efficiency through ICT are the most recurring Member States' priorities related to public sector modernisation, the **ISA² programme should work to promote the reuse of its EIRA & CarTool, Core Vocabularies, Common Service Vocabulary Application Profile, Re3gistry, TESTA and CAMMS, among others, solutions[209] in order to enable efficiency, interoperability and better service delivery in national public administrations**. Furthermore, the 2018 ISA² work programme[210] lays down plans to explore the incorporation of the new technologies into public sector modernisation[211]. It is important to ensure that the results of this action are disseminated to the Member States.

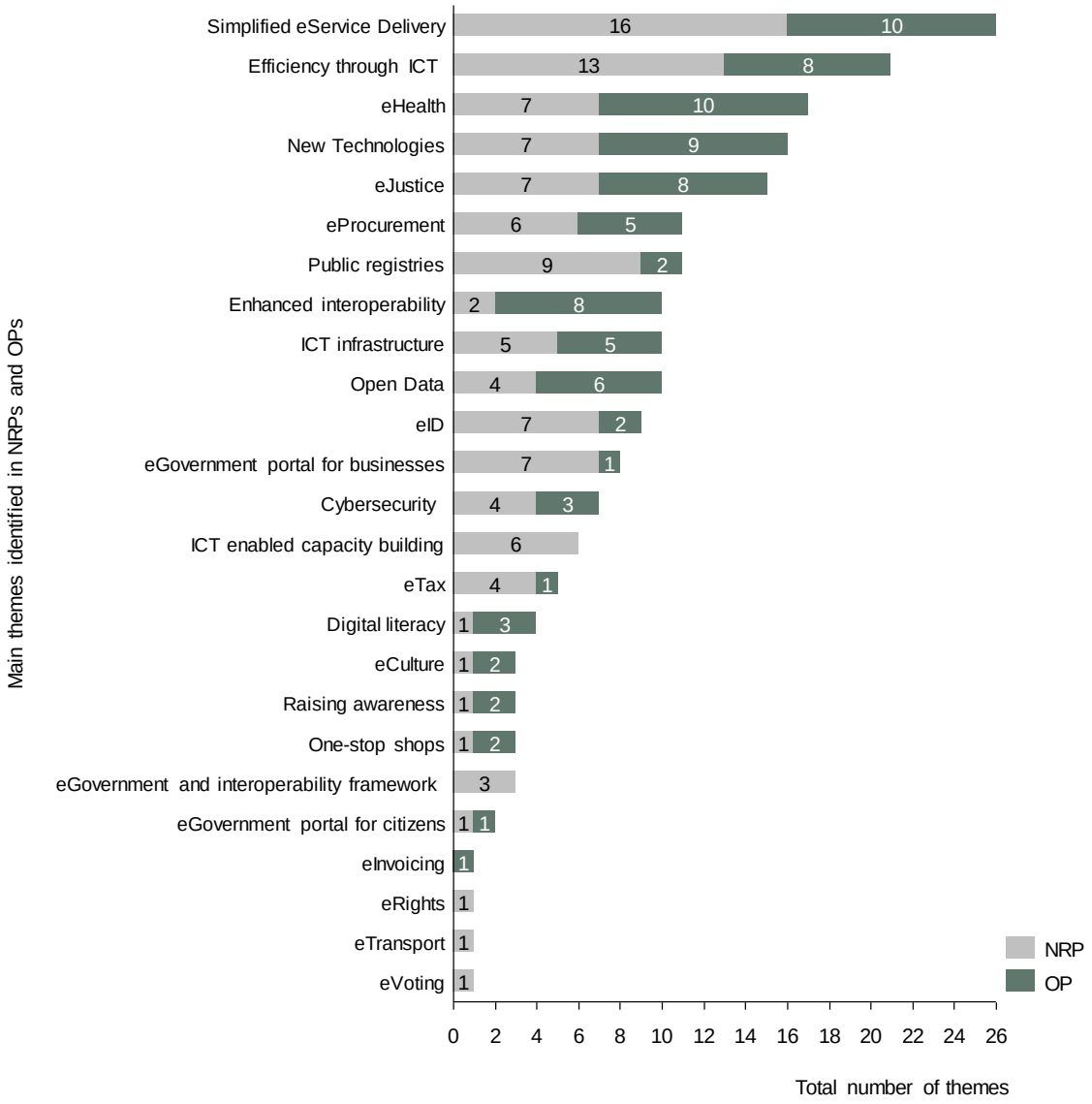
Based on the Member States' reform priorities presented in Figure 6 Figure 6below and the macroeconomic challenges identified in the CSRs, as summarised in Table 2, it is evident that Member States' reforms related to the modernisation of public administrations are closely aligned with the challenges they face. The main economic challenges highlighted in the recitals of Member States' 2017 CSRs related to public sector modernisation were low administrative capacity, need for better public procurement, inefficiencies in the justice system and imbalanced healthcare provision. In addition to simplified eService delivery and achieving efficiency through ICT, which help to enhance administrative capacity, Member States' structural reforms are also largely focused on eHealth, eJustice and eProcurement initiatives.

Conclusion Nº5 – Simplified eService delivery, efficiency through ICT and eHealth are the most frequent overlapping themes occurring throughout NRPs and OPs. Since there are few common elements linked to TO2 and TO11 mentioned in CSRs, the main convergence of thematic areas can be drawn based on the analysis of Member States' NRPs and OPs. As can be discerned in Figure 6 below, there is a significant overlapping in themes mentioned in the countries' NRPs and OPs. This is especially true when taking into account the simplification of eService delivery, the enhancement of efficiency through ICT and the development of eHealth.

Recommendation Nº4: Given the fact that eHealth is the most recurrent **sector specific** Member State reform priority in the NRPs and OPs, the **ISA² programme could provide support and guidance to DG SANTE, when needed, on developing solutions and assisting the Member States to help foster interoperability in the healthcare domain**, specifically when it comes to exchange of health records and patients' data.

[209] https://ec.europa.eu/isa2/solutions_en
[210] https://ec.europa.eu/isa2/sites/isa/files/docs/pages/isa2_2018_wp_summary.pdf
[211] Under Action 2016.10 European Location Interoperability Solutions for e-Government (ELISE)

Figure 6 Thematic Overlap between 2017 NRPs and 2014-2020 OPs



Source: in-depth analysis of 2017 NRPs and 2014-2020 OP documents, performed by Wavestone.
Notes: data prepared after carefully surveying the NRPs and OPs for countries in the study and identifying reforms linked TO2 and TO11.

An action supported by ISA²

ISA² is a EUR 131 million programme of the European Commission which develops digital solutions that enable interoperable cross-border and cross-sector public services, for the benefit of public administrations, businesses and citizens across the EU.

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